Romantic Opportunity Hoarding: Stratified Differences in How Couples Meet

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Abstract

Where people find romantic partners is a crucial link in the ongoing reproduction of group boundaries and social hierarchies, but the ways these romantic sources vary by group position has been under-examined. I argue that the meeting of romantic partners within settings that are exclusive and segregated amounts to romantic opportunity hoarding, and that this form of social closure occurs disproportionately among groups higher in social hierarchies. Using nationally representative data from six countries, I show that there are remarkably consistent patterns across cultures in the stratification of how couples meet by education and income, with those socioeconomically higher more often meeting their partners in organizational settings, and those lower more often meeting through informal interpersonal introductions. I also find some evidence that there is an overall disproportionate use of exclusive settings and introductions by higher status groups, including by White Americans and by more educated Germans and East Asians, but this pattern is not as ubiquitous. Online dating stands out as a new and exceptional form of public self-introduction, characterized by greater use among higher status groups than other non-organizational sources of romance in the U.S., but more avoided by higher educated Germans.

The stories of how couples first met are the romantic creation myths of those social units, but they can also be viewed through the decidedly unromantic lens of social closure. Opportunities for forming valuable connections to others are not universally accessible

nor evenly distributed: they often hinge upon introductions through mutual acquaintances or other shared social network ties, or they occur within organized settings. When such settings and networks are segregated and private, then the opportunities for relationship formation within them are effectively sequestered within the group boundaries that define those settings. This is the definition of opportunity hoarding (Tilly 1998:155), but of romantic opportunities instead of economic ones. Constraining opportunities for marital partners within status group boundaries has been common throughout the history of large, complex societies. This has been true not just for the upper strata of societies (Mann 1986), but also for decidedly non-elite families that nonetheless had economic interests to advance through strategic marriages, such as peasant farmers with some property rights (Coontz 2006). And yet romantic opportunity hoarding has far more often characterized the top than the bottom of historical social hierarchies.

This phenomenon represents an important link in the reproduction of stratified group boundaries across generations. Where and how couples meet directly impacts the endogamy that results (Kalmijn 1998; McPherson, Smith-Lovin, and Cook 2001): when relationships are formed within settings segregated by a social characteristic, then the resulting couples will tend to be homogenous on that characteristic (Blau 1977). This reinforces that particular boundary not only in regards to romantic ties, but also for other kinds of relationships that result from or are impacted by those romances. Through the ripple effects that romantic relationship formation has on other social networks, romantic opportunity hoarding may be part of a broader pattern of social closure and boundary reproduction.

This paper expands on our understanding of the social closure around romantic sources in several ways. I offer a general framework for why and how we should expect romantic sources to differ by group position. I offer two competing hypotheses of how romantic opportunity hoarding is stratified: disproportionate to higher status groups, or of a different form for lower versus higher groups. I test these hypotheses using data from several very different societies, showing evidence of a widespread phenomenon that is not just descriptive of a single society or continent. I also show that romantic sources are stratified by race and ethnicity as well as by social class. I additionally argue that online dating represents a unique romantic source, one that is both an unexclusive setting for self-introductions and yet popular across social classes and racial/ethnic groups, potentially upending this pattern of closure.

Sequestered Romantic Opportunities

Opportunities can be said to be hoarded when a valuable and renewable resource is sequestered by members of a distinctive network, and supported by beliefs and practices that sustain that control (Tilly 1998:155). Most societies teem with distinctive networks that effectively sequester romantic opportunities within them, some with more intentional policing of boundaries, but many reinforced more by beliefs, norms and mating practices that encourage romance formation within them (Kalmijn 1998), as opposed to romantic initiation with unintroduced strangers in public. Opportunities are hoarded through brokerage, specifically catalyst brokerage (Stovel and Shaw 2012), the intermediation by third-parties in creating new relationships. Romantic catalyst brokerage need not be

personal, and it need not be active, nor even intentional. Organizations can also function as brokers (Stovel, Golub, and Milgrom 2011), and passive and unintentional introductions can be effectively indistinguishable from traditionally understood brokerage. Families and friends may intentionally arrange couple-matches, or they may accidentally make a new couple possible by involving them both in the same social events, or they may engage in meddling in between these extremes. While accidental brokerage may not bring the brokers' conceptions of what constitutes a good match directly to bear, the resulting couple still likely represents the composition of the network or setting that brokered them (McPherson, Smith-Lovin, and Cook 2001). Intentional romantic brokerage by organizations can occur, such as singles events within religious congregations, but organizations are far more likely to accomplish this incidentally. Educational and workplace settings bring people together for other purposes than relationship formation, but they nonetheless create many couples. But when unexclusive public settings effectively act as "brokers" without introductions through existing interpersonal ties, then romantic opportunities are not being hoarded.

Hierarchically Sequestered Opportunities for Romance?

Romantic opportunity hoarding may be common across groups in modern industrial societies, and may entail social closure in the sense of mutually-maintained barriers between groups (Wimmer 2008:980). Yet studies of couples in 20th century Western Europe have found that it is uneven along social stratification dimensions, with those higher in social class more often meeting their partners in exclusive settings and networks

(Bozon and Héran 1989; Kalmijn and Flap 2001; Lampard 2007). There are a number of reasons to expect that social closure in general is driven by the exclusionary behaviors of groups higher in stratification systems (Parkin [1979] 2001; Weber [1922] 1978), and this extends to romantic opportunities as well. These expectations can be grouped into theories of baseline structural constraints, rational strategies in mate-seeking, and cultural mechanisms that maintain group boundaries.

Baseline Opportunity Structures for Romance. A simple, baseline approach to romantic social structure expects couples to meet primarily in the settings within which they already spend their lives, and through the people they spend their time with (Blau 1977; Feld 1981). Those higher in the social stratification systems of industrialized societies tend to be more embedded in formally organized settings, including higher education, workplaces, and voluntary groups (Lareau 2003; McPherson 1981). These settings are both exclusive and typically homogenous on stratified social dimensions (Hinrichs 2015; McPherson and Smith-Lovin 1987; Tomaskovic-Devey et al. 2006), and as such the couples that meet within them effectively spring from hoarded romantic opportunities. Social network connections, and the possibilities for meeting people through informal introductions, may also be unevenly available across status groups. Those higher in the U.S. racial and educational hierarchy tend to report more people they discuss important matters with (Marsden 1987; McPherson, Smith-Lovin and Brashears 2006) and more people they trust (DiPrete et al. 2011), and those higher in income and education tend to have more expansive networks of acquaintances and weak ties (DiPrete et al. 2011).

Family and friendship networks entail their own exclusivity and homogeneity, and likewise act as sequestered sources of romantic opportunities. While having more social ties does not necessarily mean that romantic partners will be found more often through them, more expansive networks should entail more opportunities for meeting new people, other factors being equal. Conversely, those with more limited network connections and less involvement in organized settings should have fewer opportunities for romance in those kinds of sequestered social foci, and can instead be expected to more often find partners through self-introductions in public spaces.

Rational Searches for Romance. A starkly different perspective on romantic sources sees the action of searching for a partner as the focus, with actors driven by exogenous preferences, seeking a utility-maximizing match within the market place for mates they are situated within, navigating the structure of opportunities available to them to maximum effect. Here the settings within which couples meet are seen as opportunistically self-selected. Rational romance seekers should search in the settings and social networks that afford the best access to the most potential mates that meet their preferences. The competing factors that favor some settings over others include the availability of mates within them, the accessibility to the settings and networks, and the quality of interaction within the settings. The last of these includes constraints that could be labeled ‘cultural frictions’ in a rational choice framework, such as the norms governing appropriate interactions in public spaces (Goffman 1971), which may limit the effectiveness of romantic searches in very public venues.

A rational choice perspective predicts disproportionate romantic opportunity hoarding higher in social hierarchies under two conditions: a stronger within-group preference among higher status groups, and/or a widespread preference for mates from higher status groups (i.e. hypergamy, Davis [1941]). Those with a same-status preference can be expected to seek homogenous partners more efficiently in status homogeneous networks and settings, so under the first condition higher status groups would exhibit romantic opportunity hoarding more often. Under the second condition, if singles seek partners from high status groups regardless of their own status, then status-homogenous settings will be optimal sources of partners only for those who are themselves members of high status groups, whereas status-diverse settings will be optimal meeting grounds for members of groups lower in the hierarchy. Members of lower status groups optimize their chances of a high status mate by focusing their search in non-exclusive and more public settings. In a high-status-seeking system of mating, purposive exclusion isn't necessary to produce romantic opportunity hoarding, it can result entirely from differences between groups in which settings offer them the best access to high status group partners. On the other hand, if a preference for a higher status partner isn't common, and within-group preferences are similar across the social hierarchy, then rational strategies should produce similar rates of exclusive romantic sources across status groups, net of other factors.

Culturally Appropriate and Contaminated Sources of Romance. Culture can also be conceived as the prime mover in determining romantic origins, shaping individual preferences and defining social structures. Cultural mechanisms can inhibit or block

intergroup relationships in very direct ways, such as through preferences for same-race partners, but indirect cultural mechanisms can also be effective, such as those that define the acceptable opportunity structures for mates. Stigma against meeting partners in illegitimate settings can become decoupled from prohibitions against exogamy, creating an avoidance of romance in diverse settings that isn't consciously elitist or racist. This can occur through the stigmatization of the place itself, when viewed through the lens of romance-seeking. A setting such as a bar or tavern may be considered acceptable for many social purposes, but nonetheless taint any romantic connections made within them. Symbolic contamination (Douglas [1966] 2002) is disproportionately a concern of groups higher in social hierarchies, and drives their avoidance of contact with settings and objects that are seen as symbolically polluted. The obsession with separate drinking fountains and swimming pools for Whites versus Blacks in the 20th century U.S. South is a stark and recent example of this, but contamination-avoidance mechanisms can operate more subtly, such as the avoidance of physical contact when exchanging money with a sales clerk (McDermott 2006), or the role of doormen in maintaining the boundary between upper class residences and the symbolic pollution of the street (Bearman 2005:13-17). A sense of symbolic uncleanness about a setting (perhaps articulated as 'sketchy' or 'random' in current U.S. vernacular) not only impedes romantic initiations within it, but may threaten to stigmatize new relationships formed there, decreasing their chance of survival into long-term relationships. This can have the effect of sequestering romantic opportunities within more exclusive settings, disproportionately for those groups higher in the social hierarchy.

Or Hierarchically-Different Forms of Romantic Sequestration?

An alternate possibility to both hierarchical romantic sequestration and mutually-maintained barriers between groups is that romantic opportunity hoarding is common across stratified groups, but within different kinds of settings at different levels of the social hierarchy. Bozon and Héran's (1989) distinction between the "select" versus "private" sources of romance, the common meeting places of cultural versus economic elites in mid-20th century France, respectively, is a telling example of how social classes can sequester their searches for romance into different kinds of settings that accomplish similar endogamous results. While their definition of this distinction rests partly upon the culturally-selective content of the settings, it is at its heart a distinction between formally organized settings (voluntary or compulsory) and the informal social networks of family and friendship. Some of the above reasons to expect hierarchical romantic opportunity hoarding can instead be interpreted to predict that those higher in social hierarchies will use organizational sources of romance more often, while those lower will rely more heavily on informal interpersonal brokerage to find romantic partners. The extent to which higher status group members' lives are more embedded in formal settings may outweigh any advantages in social network expansiveness that they have over lower status groups. While lower group members might have more limited networks of friends and acquaintances, that difference may not significantly limit their ability to find partners through them.

Different endogamy preferences across status groups may also drive rational searches for romance into different kinds of closed settings. If educational elites are more concerned with educational endogamy, then formal organizations such as workplaces, schools and voluntary organizations offer better sources of partners for them, as those settings tend to produce social ties that are more educationally homogeneous than those made through informal social networks (Mare 1991; Marsden 1990; Mollenhorst, Völker and Flap 2008; Thomas 2018a). For status groups more interested in racial, ethnic or religious endogamy, then introductions through friends and family should be preferred, as those networks are more likely than organizations to produce endogamous social ties by those family characteristics (Marsden 1990; Thomas 2018a). While organizations or interpersonal brokerage may not suffer from symbolic pollution, cultural norms of appropriate sources of romance may also play a role in channeling different groups towards different types of romantic sources. The practice of family-brokered marriages is still strong in many parts of the world (Tsutsui 2013), and if these practices are more resilient among those less involved in the elite educational and occupational structures of industrializing societies, then this can produce a social class difference in interpersonal versus organizational romantic brokerage even without baseline differences in workplace and school embeddedness, and regardless of endogamous preferences. Even in places where arranged marriage is a historically distant phenomenon, the shift away from family and local community involvement in romantic brokerage may likewise be more extensive among those higher in the educational and occupational hierarchy.

Online Dating as an Emerging Exception.

Personal ads systems represent one of the least exclusive sources of romance, more public and open than the street, inviting anyone who can view the advert to offer a romantic self-introduction. This is fundamentally not romantic opportunity hoarding, and is in many ways exactly the kind of marketplace for mates that higher status groups are predicted above to avoid. Yet there are a number of reasons to expect elites to make heavier use of online dating than other public venues for romantic introductions. The first is the heightened capacity for screening and gatekeeping of potential partners online, which can greatly augment a rational search for mates. While deception may be perceived as a concern, the extra work to combat deception may be compensated for by the ability to select potential partners by fine-grained details that would often be difficult to detect in offline mingling (Heino, Ellison, and Gibbs 2010). This may make online dating more desirable for those searching for a high status partner. Online dating's physical remove from both people and places may also lessen the symbolic pollution from introductions in public. If an unconscious desire to avoid symbolic pollution is shutting higher status groups off from romantic introductions in public spaces, then the physical separation while interacting online may lessen that effect, by the sense that a very public virtual space is more symbolically sanitary than a physical one. While early online daters sometimes invented stories about meeting offline out of a sense of embarrassment (Ansari and Klinenberg 2015; Sassler and Miller 2014), public opinion in the U.S. has since dramatically shifted towards a view of online dating as normal and acceptable (Lenhart and Duggan 2014). A final, baseline structural factor that favors the creation of

higher status group couples online is the digital divide. Though Internet access has become more equitable in recent years in the U.S. and similarly industrialized countries, there is still a significant disparity, with less than half of the bottom income quintile having home Internet access in the U.S. (Council of Economic Advisers 2016). Home Internet access may not be strictly necessary for online dating, particularly since the rise of smart phone usage, but its lack does represent an impediment. Together these three factors predict that meeting a romantic partner online will be unusually common among higher status groups compared to other self-introductions in public settings.

Hypotheses

Hierarchical Romantic Opportunity Hoarding

Hypothesis 1: Members of groups higher in social hierarchies more often meet their romantic partners and spouses in exclusive settings and through social network introductions.

Hierarchically-Different Romantic Opportunity Hoarding

Hypothesis 2: Members of groups higher in social hierarchies more often meet their romantic partners and spouses in formally organized settings, while lower status groups will more often meet through family and friendship introductions.

Online Dating as Exceptional

Hypothesis 3: Members of groups higher in social hierarchies meet their romantic partners online at the same or greater rates than those of lower status groups.

Data and Methods

Four Datasets from Six Countries

The goals of these analyses are to test 1) whether the use of sequestered sources of romantic partners is disproportionate to groups higher in stratification systems, or of a different kind of sequestration, 2) whether this is a widespread social phenomenon across diverse cultures, 3) whether this is due to other factors that may be correlated with group position, and 4) whether meeting partners online is a break in this pattern. To ensure that I am not just describing the peculiarities of one country's mating regime (the second analytical goal), I make use of four data sources that cover six countries on three continents: Asia, Europe and North America. I would have liked to include even more continental diversity here, but nationally representative data sources that include information on how couples first met are quite rare. For instance, despite the general abundance of social data about the United States, the U.S. government has never collected such information, nor has the General Social Survey, the most comprehensive non-governmental data source on U.S. social life. How couples meet has not yet reached the level of standard demographic information. The HCMST and German Family Panel (Pairfam) are the only data sets to include information about whether partners were met online, and so are the only data appropriate for the fourth analytical goal. See Table 1 for descriptives of each sample used here.

The National Health and Social Life Survey. The earliest data I analyze here are from the National Health and Social Life Survey (NHSLS) (Laumann et al. 1992), a study that provided the first nationally representative sample with in-depth data on the romantic and sexual lives of U.S. residents, collected in 1992. The sampling frame was all addresses within the 50 states and Washington D.C. Eligible respondents were English-speaking adults ages 18-59. The survey was administered in person by a project staff member, with some sensitive questions self-administered (none of which are used here). The response rate was 78.6 percent.

The East Asian Social Survey. The East Asian Social Survey (EASS) (Kim et al. 2006) is a coordinated survey project between the Chinese General Social Survey, the Japanese General Social Survey, the Korean General Social Survey, and the Taiwan Social Change Survey, with each collecting data from a multi-stage nationally representative sample of its respective country. The 2006 EASS focused on marriage and family life, and included multiple choice questions on how respondents met their spouse or cohabiting romantic partner (Tsutsui 2013). The sampling frame varied by country: Taiwan's sampled respondents from its official population registration records, the Chinese sample selected households directly from the 2000 census, South Korea's used address-based sampling, and Japan's sampled local registers of electors (voter registration is far more automatic in Japan than in the U.S.). The response rates also varied considerably between countries: 65.7% in South Korea, 53.3% in Japan, 42% in Taiwan, and 38.5% in China. The

minimum age for participating in the survey was 20 in Japan, 19 in Taiwan, and 18 in South Korea, and 17 in China. There was also a maximum age for participation in China and Japan, 69 and 89 years old respectively. In China, Taiwan and South Korea, all surveys were administered face-to-face, while the Japanese team used both face-to-face and self-administered surveys that were delivered by mail. Note that the South Korean data does not include weights: each Korean respondent is assumed to have the same probability of being sampled.

The German Family Panel. Collected in 2008 and 2009, The German Family Panel (Pairfam) (Brüderl et al. 2016) had a more limited age target than the other data sources used here, sampling from 3 specific cohorts, ranging from 14 to 38 at the time of the survey, which I limit to 18 to 38 for these analyses. I use the Pairfam Anchor data from the first wave, which includes a multiple choice question about how the respondent met their current spouse or romantic partner. Pairfam used address-based sampling, with a response rate of 36.9%, higher for the youngest cohort, lower for the oldest. The survey was administered as a computer-assisted personal interview, with sensitive questions self-administered (none of which are used here), and respondents were paid ten euros for completing it (Huinink et al. 2011).

The How Couples Meet and Stay Together Survey. The most recent dataset I use here contains uniquely detailed information about the origins of U.S. couples. The first wave of the How Couples Meet and Stay Together survey (HCMST) (Rosenfeld, Thomas, and

Falcon 2015) was initially conducted in 2009 using the Knowledge Networks' (KN) panel of respondents (KN has since been acquired by the German market research company GfK), with a new sample of respondents in 2017. The 2009 KN panel subjects were sampled from the English-speaking U.S. population through random digit dialing of numbers in the 50 states of the U.S. and Washington D.C., while the 2017 panel subjects were drawn from address-based sampling. Sampled households were then recruited through follow up calls and certified mail, when necessary, with an attempt to recruit every member of the household (only one household member could participate in the HCMST survey). Respondents who did not initially have Internet access were given it as part of their payment for participation, through WebTV at the time of the 2009 survey, and through a tablet computer by the time of the 2017 survey. The HCMST survey had a 71 percent response rate from the selected KN panelists in 2009, and 50 percent in 2017. The cumulative response rate, through all of the steps from the initial RDD or address-based recruitment into the panel, through attrition over time within the panel, and then to completing the HCMST survey, was much lower, in the teens for both samples. This cumulative rate is not really comparable to traditional survey response rates, however, as KN partially controls for potential attrition bias by using demographic information collected at each survey stage (Couper 2000), and KN panel surveys have been shown to perform better than traditional random-digit-dial samples at estimating population level parameters (Baker et al. 2010:743; Chang and Krosnick 2009).

Measuring How Couples First Met

The measurements of how couples first met vary in important ways between the data sources. The between-country differences in romantic sources observed here may be artifacts of these measurement differences, but it is the within-country patterns by status groups that are the focus here, and the consistency of these patterns across countries. All of the surveys used here measured how couples met with multiple choice question(s), though not with the same categories, and the HCMST survey also included an open-ended text response in which the respondents described how they first met their partners in detail. The Pairfam study of Germany only asked one question about the setting or family/friend that introduced them, while the NHSLS and HCMST asked separate questions about who introduced them and what setting they met within. The EASS first asked if the couple's first meeting was arranged or introduced, or whether the respondent met their partner "by myself." If the former, the respondent was asked to identify who introduced them, and if the later, the respondent was asked to identify the setting they met within, which could also entail implicit interpersonal brokerage (e.g. a family gathering). See Appendix Section B for the exact wording of these questions (with English translations).

The HCMST survey offered the most flexibility in categorizing how the couples met. The web survey first asked how respondents to describe in detail how they met their partner, in a large blank text box, and then prompted respondents at least once to write more, resulting in fairly detailed answers from the great majority of respondents: the median story was 185 characters long, with 75% longer than 100 characters and 25% longer than 353 characters. These 2009 answers were open-coded by two data authors to induce a

number of non-mutually-exclusive categories of meetings. The stories were then recoded by this scheme by two data authors and an additional coder, with a high degree of inter-coder reliability (Rosenfeld et al. 2015), which was later extended to the 2017 sample's answers. HCMST additionally included two multiple choice questions modeled on the questions from the NHSLS, asking respondents who introduced them to their partner, the other asking about the setting they first met in. HCMST also adapted questions from the Households in the Netherlands study (Kalmijn and Flap 2001) that asked respondents about shared contexts with their future partner prior to first meeting each other, including attending the same school, having mutual friends, and whether their parents already knew each other.

The detailed categorizations of first meetings are thus necessarily different between these four data sources, but I simplify these into four broad categories that are comparable across datasets: introductions through family and/or friends, meetings within formal organizations, meetings unintroduced in public spaces and venues, and online first meetings (Pairfam and HCMST only). When it was possible to code a case as both an interpersonal introduction and an organization first meeting, I coded it as organizational. Examples of this include introductions through coworkers or classmates, or HCSMT respondents who identified a friend introduction within church. Unfortunately, the EASS category for friendship introductions also included classmates, so I coded all of these as interpersonal rather than organizational. Public self-introductions only included cases that did not identify any introduction nor any organization. These included meetings in bars or discos, in parks or on beaches, on vacation, and non-Internet personals ads. In the

HCMST data, I likewise coded meetings as through the Internet only if no other organizational or interpersonal brokerage was identified by any of the multiple choice or open text answers, including having mutual friends or their parents knowing each other before first meeting.

Measuring Group Position: Social Class and Race

Though the stratification systems are not the same across these six countries, comparable measures of social position are available in the datasets I use here. To measure the respondent's education, I use a simplified version of the ISCED scale, distinguishing between less than an upper secondary degree, an upper secondary degree (equivalent to a high school diploma in the U.S.), some post-secondary education, and a tertiary degree (a college undergraduate degree or equivalent). Parent's education contains considerable missingness in the German and East Asian data, so I use the available information to code respondents into three categories: at least one parent with a college degree or equivalent, neither parent with such a degree, and no data on either parent's education. While this last category is missing data that could be imputed (see Models below), I instead treat this as itself an indicator of social class position. Note that the HCMST only includes data on the respondents' mothers' education, not their fathers'. I also include household income as a measure of socioeconomic status, recoded into sextiles within each country. I include occupational status as well, coding respondents into three categories: those with a professional, technical, or managerial occupation (based on ISCO classifications), those with a different type of occupation, and those who aren't employed. The HCMST data

does not include occupational information, but does include employment status, so those models only compare the not-employed to all of the employed.

The two U.S. data sets (NHSLS and HCMST) and the German Pairfam data all include indicators of the respondents' race/ethnicity, while the EASS did not. In the models below I operationalize this as the simple dichotomy of minority groups vs majority group, treating Germans as the majority group in Germany (not including "Half-Germans" nor Aussiedlers, ethnic German immigrants from Eastern Europe), and White non-Hispanics as the majority group of the U.S. More detailed racial and ethnic breakdowns of how couples met are displayed in Figure 2 and Appendix Figure A1.

Additional Controls

In the multivariate models below, I additionally control for the respondent's gender, age, whether the couples is married and/or coresident, how long the couple has been together, and the population size of the respondent's local metropolitan or geographic area (the designation of which varies by data source). The HCMST 2017 data includes information about the most recent relationships of currently single respondents (N=377, or 7.3% of the HCMST sample), so in those models I also control for whether the response was about a previous or current relationship, the year of the sample, and how long the relationship lasted (which isn't redundant with age and years together for past relationships). In the pooled EASS models I include country indicators.

Models

I use binary and multinomial logistic regressions below to predict the type of romantic source the respondents met their partners within. There is some missing data in all four of the data sources, the extent of which varies considerably. In the HCMST data, only 8% of the respondents who gave any information about a partner didn't provide all of the information used here, most of which (5%) was due to a failure or refusal to answer how they met their partner, and most of the rest (2%) due to missing information about where they currently live. Missing income information was more common in the non-U.S. data: 10% of the EASS and 17% of the Pairfam respondents didn't provide household income information, compared to 7% of the NHSLS respondents and no missing income data in the HCMST. The EASS did not have significant missing data for these analyses aside from the income issue, but an additional 5% of partnered adult Pairfam respondents didn't answer the how-they-met question, and 2% didn't provide their race/ethnicity. Two percent of the NHSLS respondents didn't provide information on when their relationship started. For all data sources, I use listwise deletion of these cases to minimize type I errors (Allison 2009), but the results here are not meaningfully different from those using multiple imputation of missing data. Same sex relationships were not asked about in the EASS, and are small in number in the NHSLS and Pairfam data, so I only include different sex couples in the analyses below. In all multivariate models I pool the samples that used the same survey instruments, which are the 2009 and 2017 samples of the HCMST data, and the Chinese, Japanese, South Korean and Taiwanese samples of the EASS.

Results

Cross Cultural Patterns in How Couples Meet, by Social Class & Race

Some of the differences apparent here between these data sets may be artifacts of methodological differences, due to differences in the sampling of respondents and measurements of how couples met, rather than actual differences between nations and cultures. The focus here is instead on the differences between groups within samples, and the consistency in some patterns across countries.

There is some support for Hypothesis 1 in the bivariate patterns across countries. Figure 1 illustrates the rates at which people meet in an offline public/unexclusive settings without an introduction, by occupational class and college degree status. I include, for comparison, findings from three previous studies on France (Bozon and Héran 1998), the Netherlands (Kalmijn and Flap 2001) and the U.K (Lampard 2007), all of which focused on the manual/non-manual occupational distinction, so I use this as well for the other data sources in Figure 1. While meeting partners in public without brokerage is disproportionately common among lower educational and occupational groups across most of these societies, it is not ubiquitous: that pattern isn't observed in China and Taiwan, and while the pattern may seem to be there in the 1992 U.S. data and the 2006 South Korean data, those differences are not statistically significant. The stratification of exclusive romantic sources is strongest in the previous studies of Western Europe in the

20th century, but the more recent data from 21st century Japan, Germany and the U.S. show that this is not a phenomenon strictly confined to that time and place.

Looking at more detailed breakdowns of how couples met, there are clear common patterns across these very different countries in the stratification of how couples meet. Figure 2's first panel displays the weighted percentages of respondents who met their partner in each mutually-exclusive category of romantic source, by the respondent's education. Finding a partner in an organized setting is more common the more educated a respondent is, in a clear staircase pattern across these countries. A good part of this is due to first meeting in schools and colleges (see Appendix Figure A2 for proportions met within specific sources, by education), but first meetings in workplaces are also more common among the more educated in East Asia and the U.S., and meeting in voluntary organizations more common among educated Germans and Americans. Offsetting this pattern, introductions to romantic partners through friends and family is decreasingly common the more educated respondents are, in an opposite staircase pattern observed across these countries. This also holds when considering both family and friends separately (see Appendix Figures A2). These patterns are also observed with respect to parental education, though less clearly, and with respect to household income: the higher the income of the respondent's household when surveyed, the more likely it is that the respondent met their partner in an organization, the less likely through an introduction. As with education, the relationship between income and meeting type is remarkably consistent across countries. Supporting Hypothesis 2, the overall pattern is of greater

organizational brokerage among those higher in the socioeconomic hierarchy, greater informal interpersonal brokerage among those lower.

Figure 2 also shows weighted percentages of first meeting types by race and ethnicity, for the U.S. and German samples (the EASS included no information on race and ethnicity). The salient categories are quite different between these two countries. In the German data, the Aussiedler category are immigrants and the children of immigrants of German ancestry from other countries, largely Eastern European, who's families have often not lived in Germany for generations, and often don't speak German natively, but have had a special and politically favored path to immigration and German citizenship (Söhn 2013). The Turkish and Aussiedler minorities in Germany stand out in different ways from the dominant German ethnic group: Turkish-Germans meet their partners through family and on vacations far more than any other group in Germany (see Appendix Figure A1 for detailed breakdowns by race/ethnicity), but meet partners at school, work and public settings the least. Aussiedlers also less often meet partners in formally organized settings, but are instead exceptionally likely to find romance through friendship introductions. Together with Germans and "Half-Germans," these categories exhibit staircase patterns similar to those of education and income (Figure 2), with the dominant group most likely to meet in formally organized settings, the most stigmatized minority most likely to meet through family and friends. In the U.S. data, there isn't a staircase hierarchy of groups, but instead there is an exceptionalness of the dominant group: White Americans stand out as exceptionally unlikely to first meet a romantic partner in a public setting without an introduction. This is observed in both data sets, and Whites are correspondingly more

likely to meet both through introductions and organizations. Black respondents were less likely to report meeting a partner through work, in both data sources (see Appendix Figure A1). Other Black and Hispanic differences vary by the year/sample, but in both they are more likely to find a partner without brokerage compared to Whites. This stands in sharp contrast to the German case, where it is the most aggrieved group, Turkish-Germans, who are exceptionally unlikely to meet a partner in a public setting.

Multivariate Analyses

The patterns described above also hold when controlling for potential confounding factors, including controlling for the multiple dimensions of social stratification examined here together. Table 2 displays odds ratios from logistic regression models predicting whether the couple met in a public setting without an introduction. There is some support here for Hypothesis 1, but as with the bivariate figures, there isn't always evidence of hierarchical romantic opportunity hoarding in all of the data sources. The racial/ethnic difference in the likelihood of a public first meeting in the U.S. is only supported with the more recent data, finding that minority groups have over 1.2 greater odds of public sources of romance that the dominant White group, or 3.3% greater probability at observed covariate values ($p<.05$). In Germany, however, minority groups have less than .77 the odds of such public meetings compared to the dominant group, or a 4.8% lower probability ($p<.05$). The effect of education on exclusive sources of romance appears to be in the same direction across these countries and samples, but it isn't

statistically significant in the U.S. models. In both East Asia and Germany, however, each step on the 4-point educational scale decreases the odds of a public source of romance by a little more than a sixth, or on average a 3.3% lower probability in Germany per step ($p<001$), and a 1.6% lower probability per step in East Asia ($p<.01$). While this is evidence of stratified romantic sequestration, it is not apparent on all of the stratification dimensions, nor in every data source and country examined here.

Table 3 displays odds ratios predicting whether respondents met their partner through a friend or family, in a public setting without an introduction, or online (the HCMST and Pairfam models only), compared to having met their partner within an organization. The differences between racial/ethnic romantic sequestration in Germany vs the U.S. that are visible in the bivariate figures can be seen here as well. In the U.S. HCMST data, ethnic/racial minorities have over one and three quarters greater odds of having met their partner in a public setting unintroduced than through an organization, compared to White Americans, or a 4.8% greater probability of a public romantic source, averaged across observed covariates ($p<.001$). There isn't, however, a racial difference in meeting through family/friends versus through an organization, nor are U.S. minorities more nor less likely to meet online versus through an organization. In Germany, the difference in public meetings isn't significant between the majority and minority groups, but ethnic minorities have nearly twice the odds of meeting through family or friends versus meeting within a formal organization. This translates into a 14% greater probability of family/friend romantic brokerage for ethnic minorities vs the German majority ($p<.001$), and a 9.5% lower probability of organizational romantic brokerage ($p<.001$).

The remarkably uniform educational patterns seen in the figures also hold in the multivariate models, illustrating very similar effects of educational stratification on how couples meet across these very different societies. Each step higher on the educational scale increases the odds of meeting their romantic partner in an organized setting, and decreases the odds of a romance through a family/friend introduction or a public self-introduction. The size of this effect varies a bit between these data sources, from on average a 3.5% higher probability of an organizational romantic source in East Asia for each educational scale step ($p<.001$) to a 6.9% higher probability in Germany ($p<.001$). Income also shows very similar effects across these datasets of favoring organizational over interpersonal romantic brokerage, though its effect is not quite statistically significant in the German model. In the East Asian data, a one sextile increase in household income predicts a 1.6% lower probability of a family/friend introduction ($p<.01$), or a 1.5% decrease in the 2009/17 U.S. model ($p<.05$).

In both of the U.S. data sets, having at least one parent with a college degree predicts less than three fourths the odds of an interpersonal introduction versus organizational romantic brokerage, or a 7.9% lower probability of friend/family brokerage in the NHSLS model ($p<.01$), 4.6% lower in the HCMST model ($p<.05$). This is controlling for the respondent's own education, so this cannot be attributed to the simple structural exposure of more time spent in schools. Note that both of the other data sets, the EASS and Pairfam, had much larger proportions of respondents who didn't provide information about their parent's education, and the East Asian countries had very low percentages of

respondents who did have a college educated parent. The U.S. data has the most variance in non-missing parental education, and is the best test for that effect.

In contrast to the findings of the previous studies on 20th century Western European couples, illustrated in Figure 1, occupational classification is the stratification dimension least predictive of romantic opportunity hoarding differences in the data sets studied here. Though those earlier studies examined the manual versus non-manual distinction, I use the professional/technical/managerial distinction here, but the results are consistent with either classification scheme. Only in the German data is there a significant effect of being in the higher occupational class on how romantic partners are met, with the higher group showing a little more than three fourths the odds of a family/friend introduction versus an organizational first meeting. This translates into an average 4.9% lower probability of informal interpersonal romantic introductions ($p<.05$) and a 4.3% higher probability of an organizational romantic source for the technical/professional/managerial class in Germany.

Finding a partner online, which almost always entails a self-introduction to a stranger in a very public virtual space (Rosenfeld and Thomas 2012), stands out from other public meetings in a number of ways. Supporting Hypothesis 3, more educated Americans are roughly equally likely to meet a partner online as to meet a partner in an organization like the workplace or school, controlling for other factors, despite being less likely to meet in any other non-organizational way compared to less educated Americans. This is not the case in Germany, however, at least among the younger cohorts of Germans studied here: more educated German young adults are less likely to find a partner online than their less

educated peers. For each step on the educational scale, Germans' odds of an Internet-formed romance decreases by almost a fourth. Note, however, that the marginal effects of education on online romance are not statistically significant. This is mixed evidence of the exceptionality of finding partners online: an exceptionally popular public source of romance among higher status groups in the U.S., but perhaps not in Germany.

Discussion and Conclusion

The sources of couples clearly differ by social class, in very similar ways across most of the societies examined here, as well as by race and ethnicity in the U.S. and Germany. The rate of organizational romantic brokerage, the meeting of partners in formally organized and exclusive settings such as schools, colleges, workplaces, and voluntary organizations, is greater for higher status groups across all of these societies. Groups lower in the status hierarchy more rarely meet partners in these formal settings, but the informal settings of family and friendship more often define their romantic social closure. There is also evidence that lower status group members find partners more often in public settings than those from higher status groups, but only by race/ethnicity in the U.S. and by educational standing in Germany and East Asia. The more clearly widespread pattern is not hierarchically disproportionate romantic opportunity hoarding, it is the organizational versus interpersonal differences in romantic social closure, by group position.

Gendered Romantic Social Closure

I've left unexplored here the role that gender may play in romantic opportunity hoarding. Women are both disproportionately affected by safety concerns in the search for romance (Walters, Chen, and Breiding 2010) as well as disproportionately policed in their romantic and sexual behaviors (Crawford and Popp 2003), and thus should be disproportionately affected by concerns for culturally appropriate sources of romance. For both of these reasons, women may play a greater role than men do in sequestering romantic opportunities within groups and networks that are perceived as safer and more legitimate. While this won't be detectable in the patterns of different sex couples, it may be apparent in gender differences in how same sex couples meet, with more public and unbrokered sources of romance among male couples, and female couples meeting in ways more similar to how different sex couples meet.

The Implications of Online Dating on Romantic Social Closure

In the U.S., the racial majority and higher educated groups meet partners online at roughly the same rate as they do within organized settings. In Germany, on the other hand, more educated young adults don't meet online as often as they do within organizations, and for them online brokered romances are about as unlikely as meeting in public or through family and friends. This suggests a potentially very different role for online dating in different societies. As online dating expands in the U.S., with a corresponding decline in introductions through friends, family and organizations

(Rosenfeld and Thomas 2012), the Internet may be breaking down stratified romantic social closure. By shifting romantic opportunities across the socioeconomic and racial spectrum into very public settings without interpersonal brokerage, online dating is undermining romantic opportunity hoarding in the U.S. There is already evidence that couples who meet online are more likely to cross status group boundaries such as race, religion and educational classes, in both the U.S. and Germany (Potarca 2017; Thomas 2018b). We may be entering an era of couple formation that relies less on romantic opportunity hoarding within exclusive settings and networks to reproduce group boundaries, and more on the filtering and selectivity of individual online behaviors, driven by preferences and norms, channeled through online interfaces. While such micro-mechanisms can powerfully segregate online interactions (Adamic and Glance 2005), the baseline possibilities for diversity are far greater in public online settings than in offline settings with more entrenched segregation. A couple-formation regime that relies heavily on self-sorting in public may also be more responsive to changes in the alignment of social dimensions (Blau 1977), particularly to shifts that de-align cultural and group boundaries. Such a regime certainly has more potential for intergroup contact than those that sequester most romantic opportunities within homogenous settings, largely precluding diverse couples from ever meeting. But if higher status groups avoid finding partners online, as appears to be the case with young adults in Germany, then in those societies online dating may simply be part of a continued pattern of stratified avoidance of unsequestered sources of romance.

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Table 1. Unweighted Sample Descriptives

Country	*U.S.*	*U.S.*	*China*	*Taiwan*	*Japan*	*South Korea*	*Germany*
Sample Year(s)	*1992*	*2009/17*	*2006*	*2006*	*2006*	*2006*	*2008-9*
Data Source	*NHSLS*	*HCMST*	*EASS*	*EASS*	*EASS*	*EASS*	*Pairfam*
% Who Met Their Partner Through							
Family/Friend(s)	38.28	34.09	72.23	59.28	49.96	64.49	40.22
	893	*1758*	*1722*	*760*	*602*	*739*	*1801*
an Organization	43.93	46.27	21.27	30.66	33.94	20.42	32.27
	1025	*2386*	*507*	*393*	*409*	*234*	*1445*
a Public Setting	17.79	9.46	6.50	10.06	16.10	15.10	22.98
	415	*488*	*155*	*129*	*194*	*173*	*1029*
the Internet		10.18					4.53
		525					*203*
Mean Education (1-4 scale)	2.65	2.86	1.46	1.91	2.35	2.41	2.67
	(0.97)	(0.99)	(0.75)	(1.06)	(0.99)	(1.16)	(1.03)
% w/ a College Grad. Parent	20.75	17.82	0.34	3.67	14.11	9.08	6.79
	484	*919*	*8*	*47*	*170*	*104*	*304*
% Missing Parent's Education	2.53	0.43	36.12	1.79	18.59	7.07	37.76
	59	*22*	*861*	*23*	*224*	*81*	*1691*
% Professional/Tech./Mngr.	24.82		21.31	22.39	17.01	23.21	34.19
	579		*508*	*287*	*205*	*266*	*1531*
% Not Employed	24.65	35.97	8.39	35.49	41.16	39.27	27.62
	575	*1855*	*200*	*455*	*496*	*450*	*1237*
Mean HH Income Sextile	3.43	3.49	3.48	3.33	3.51	3.50	3.50
	(1.60)	(1.43)	(1.35)	(1.87)	(2.02)	(1.64)	(1.65)
% Racial/Ethnic Minority	21.65	26.60					15.88
	505	*1372*					*711*
% Female	54.91	51.44	55.41	52.34	52.53	58.29	56.45
	1281	*2653*	*1321*	*671*	*633*	*668*	*2528*
% Married	67.17	69.05	99.92	90.72	90.95	90.14	62.30
	1567	*3561*	*2382*	*1163*	*1096*	*1033*	*2790*
% Coresident	76.25	79.37	92.20	89.63	90.37	85.43	88.28
	1779	*4093*	*2198*	*1149*	*1089*	*979*	*3953*
Mean Age	35.46	47.99	44.36	50.62	55.45	48.07	31.78
	(11.06)	(16.79)	(11.78)	(14.34)	(14.51)	(13.58)	(5.13)
Mean Age Met/Married	23.57	25.92	24.04	25.83	26.31	26.35	23.00
	(7.14)	(11.53)	(4.14)	(5.81)	(4.83)	(4.45)	(5.08)
Mean Years Together	11.92	22.07	20.33	24.79	29.15	21.72	8.78
	(10.16)	(17.12)	(12.16)	(15.60)	(15.24)	(15.51)	(5.76)
N	*2333*	*5157*	*2384*	*1282*	*1205*	*1146*	*4478*

Notes: Unweighted sample descriptives, with standard deviations in parentheses and counts in italics, where appropriate.

Table 2. Odds Ratios from Logistic Regressions Predicting a Public Source of Romance

Country Sample Year(s)	*U.S.* *1992*	*U.S.* *2009/17*	*East Asia* *2006*	*Germany* *2008-9*
Racial/Ethnic Minority	1.183	1.247*		0.768*
Education Scale (1-4)	0.903	0.962	0.840**	0.836***
Parent's Education (vs No College)				
At Least 1 College Graduate	1.206	0.903	0.895	0.723+
Missing Parent's Education	1.604	1.230	0.935	1.090
Occupational Status (vs Non-P/T/M)				
Professional/Technical/Managerial	1.085		1.292+	1.012
Not Employed	0.904	1.256*	1.246+	0.950
Household Income in Sextiles	0.978	0.978	1.049	1.029
McFarland's Psuedo-R^2	0.029	0.083	0.034	0.012
N	2333	5157	6017	4478

Notes: + p<.1, * p<.05, ** p<.01, *** p<.001

Survey-weighted estimates from samples of respondents with different-sex partners. Covariates not shown: Age, Gender, Married, Coresident, Years Together, Year Surveyed (HCMST), Relationship Duration (HCMST), Still Together (HCMST), Country (EASS), and Metro/Municipal/County Population Size. For full model coefficients, see Appendix Tables C1-C4.

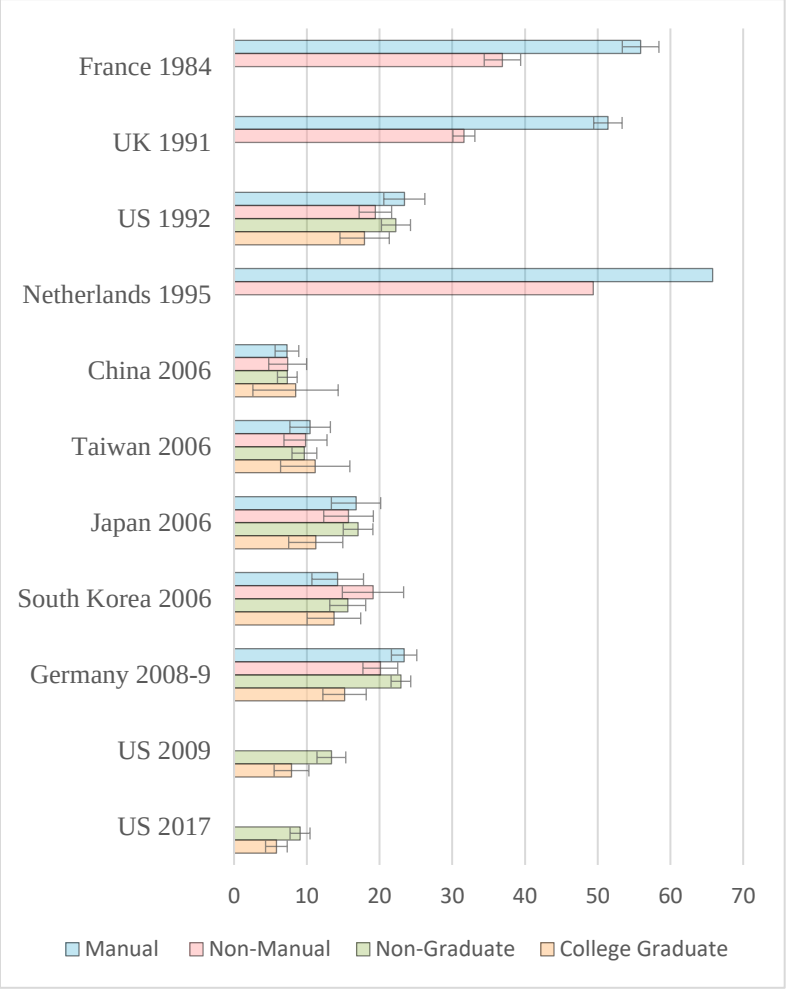
Table 3. Odds Ratios from Multinomial Logistic Models Predicting How Couples Met, vs. within an Organization

Country/Region	*U.S.*		*U.S.*			*East Asia*		*Germany*		
Sample Year(s)	*1992*		*2009/17*			*2006*		*2008-9*		
	Family/ Friend	Public Setting Offline	Family/ Friend	Public Setting Offline	Online	Family/ Friend	Public Setting Offline	Family/ Friend	Public Setting Offline	Online
Racial/Ethnic Minority	1.088	1.242	1.050	1.751***	0.943			1.919***	1.238	0.823
Education Scale (1-4)	0.771***	0.792*	0.750***	0.722***	1.019	0.825***	0.743***	0.742***	0.707***	0.728**
Parent's Education (vs No College)										
At Least 1 College Graduate	0.714**	1.054	0.742**	0.685+	0.797	1.184	1.011	0.932	0.666+	0.805
Missing Parent's Education	1.342	1.883	0.575	1.048	0.805	1.058	1.030	1.134	1.220+	0.970
Occupational Status (vs Non-P/T/M)										
Professional/Technical/Managerial	0.990	1.080				0.928	1.253	0.770*	0.896	0.876
Not Employed	0.758*	0.796	1.021	1.099	1.337*	1.154	1.378*	0.984	0.891	1.381
Household Income in Sextiles	0.901**	0.930	0.921**	0.966	0.941	0.917***	0.981	0.950+	0.996	1.065
McFarland's Psuedo-R^2	0.036		0.100			0.100		0.052		
N	2333		5157			6017		4478		

Notes: + p<.1, * p<.05, ** p<.01, *** p<.001

Survey-weighted estimates from samples of respondents with different-sex partners. Covariates not shown: Age, Gender, Married, Coresident, Years Together, Year Surveyed (HCMST), Relationship Duration (HCMST), Still Together (HCMST), Country (EASS), and Metro/Municipal/County Population Size. For full model coefficients, see Appendix Tables C1-C4.

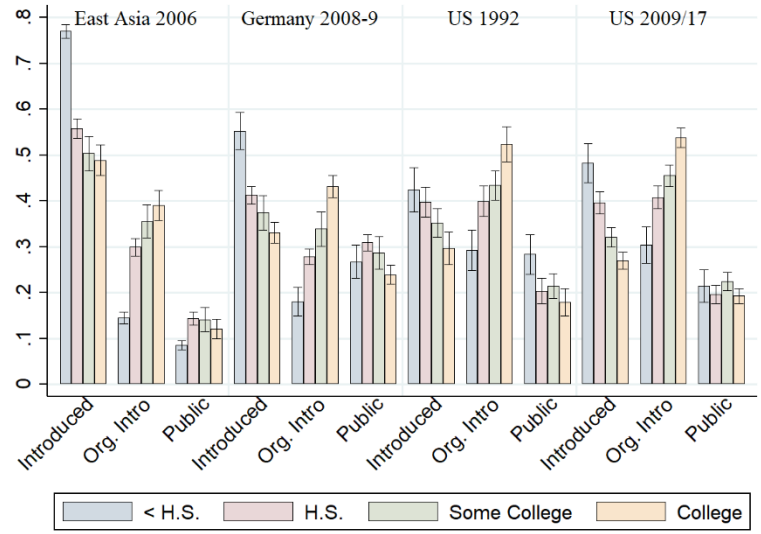
Figure 1: Percentages Of Couples Who Met Unintroduced in Public, by Occupation & Education, from Eleven National Studies



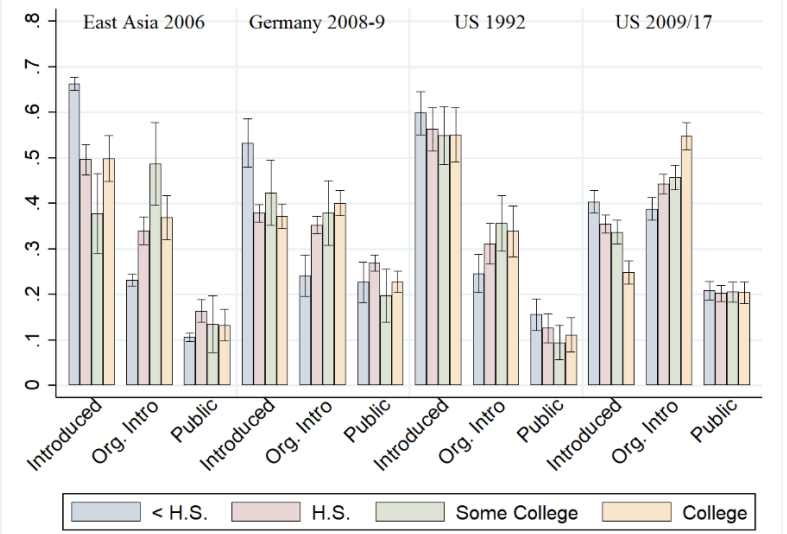
Notes: Survey weighted estimates. Standard errors estimated with survey weights in US, East Asian & German data, calculated from table percentages and Ns from French and UK articles. Standard errors are not calculable from Kalmijn & Flap's (2001) table of Dutch couples, but they report a significant χ^2 test ($p<.05$).
Data: France 1984 (Bozon & Héran 1989: Table 2); U.K. 1991 (Lampard 2007: Table 2, Column 6); U.S. 1992: National Health and Social Life Survey (Laumann et al. 1992); Netherlands 1995 (Kalmijn & Flap 2001: Table 3); China, Taiwan, Japan & South Korea 2006: East Asian Social Survey (Kim et al. 2006); Germany 2008-9: The German Family Panel (pairfam) (Brüderl et al. 2016); U.S. 2009: How Couples Meet and Stay Together Survey (Rosenfeld et al. 2015)

Figure 2. Survey Weighted Proportions of Categories of How Couples Met, by Indicators of Social Class and Race/Ethnicity

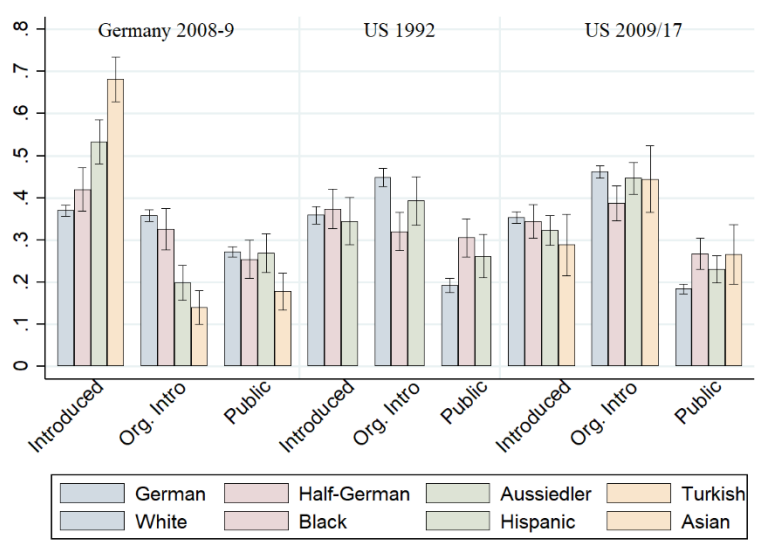
Education



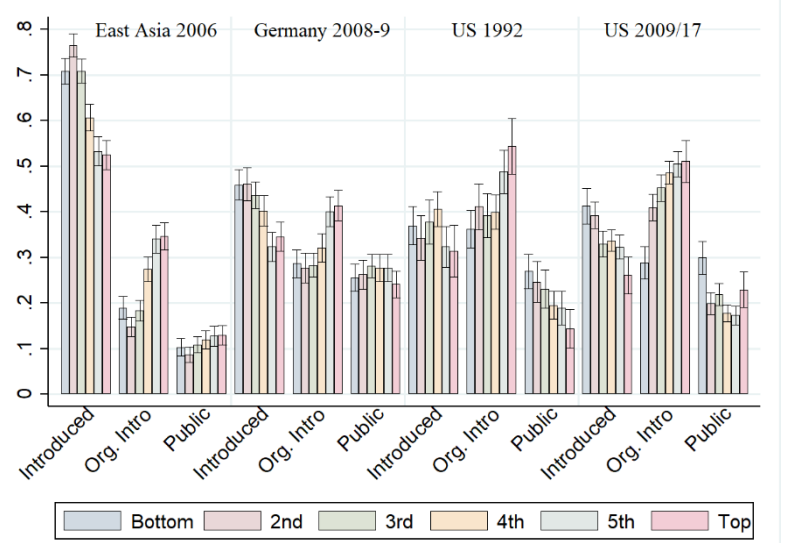
Highest Parent's Education



Race/Ethnicity



Household Income, by Sextiles

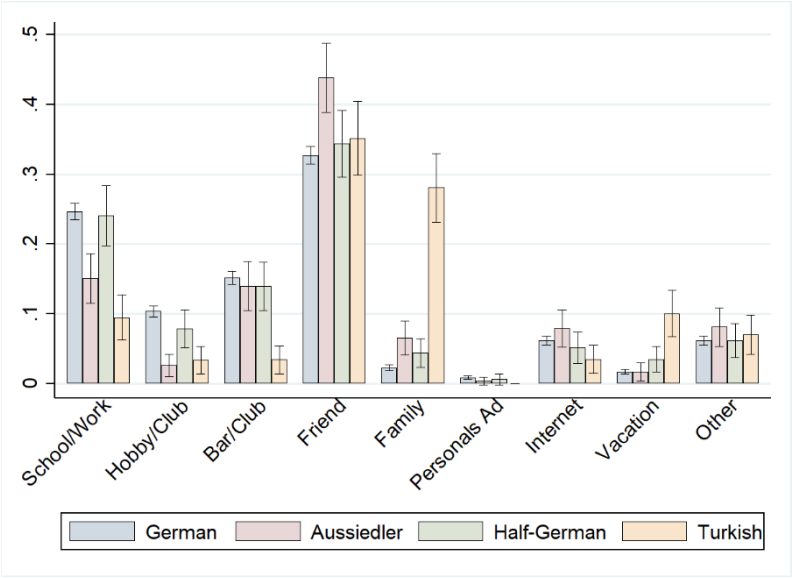


“Romantic Opportunity Hoarding” Appendix **Reuben J. Thomas**

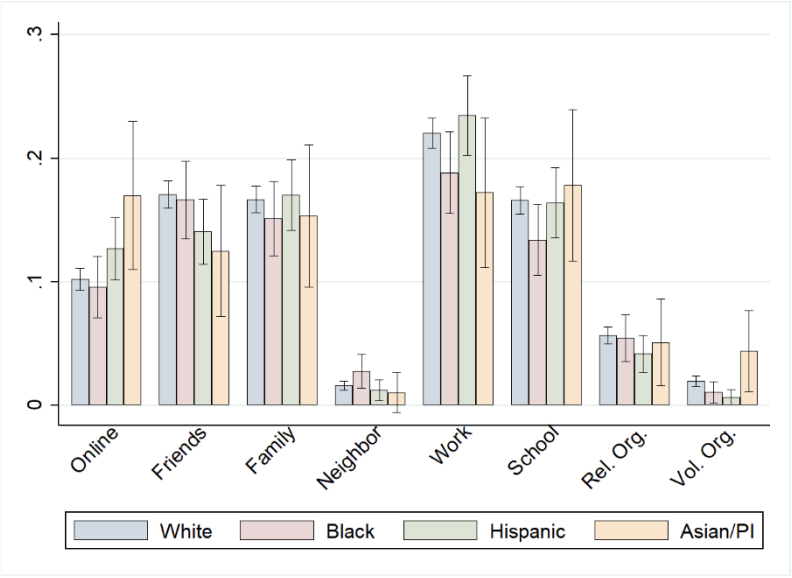
Section A. Supplementary Figures: Proportions of Detailed Categories of How Couples Met

Figure A1. Race and Ethnicity

Germany 2008-9



US 2009/17



US 1992

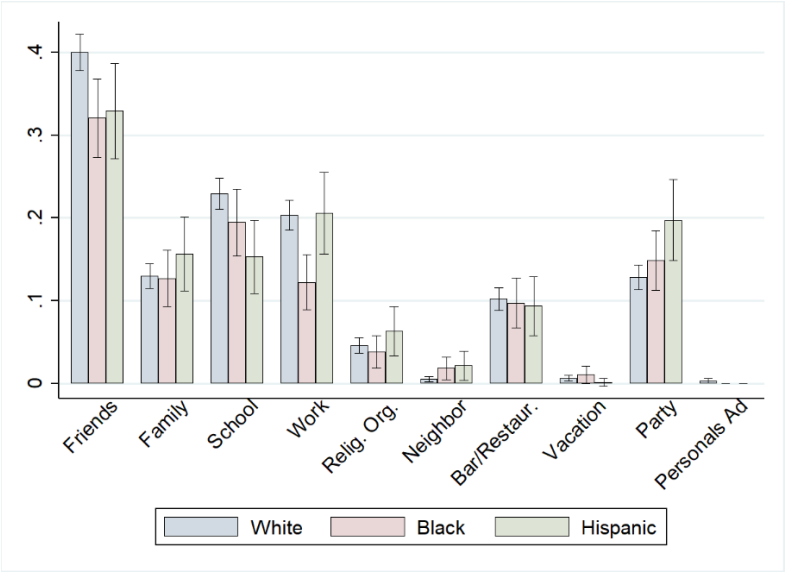
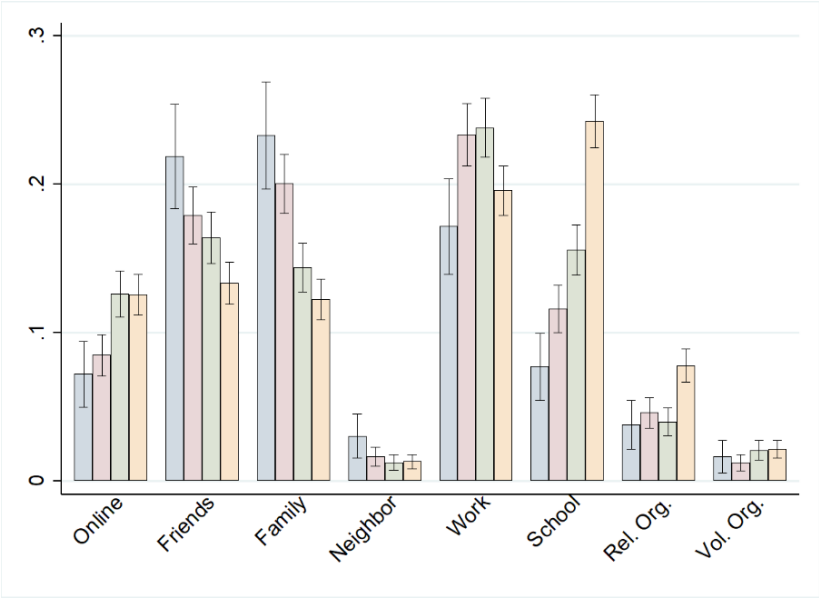
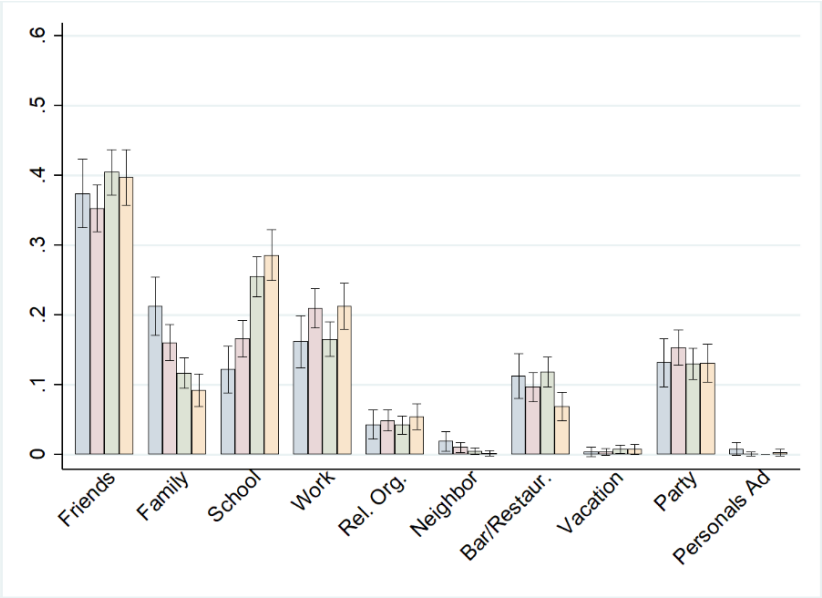


Figure A2. Education

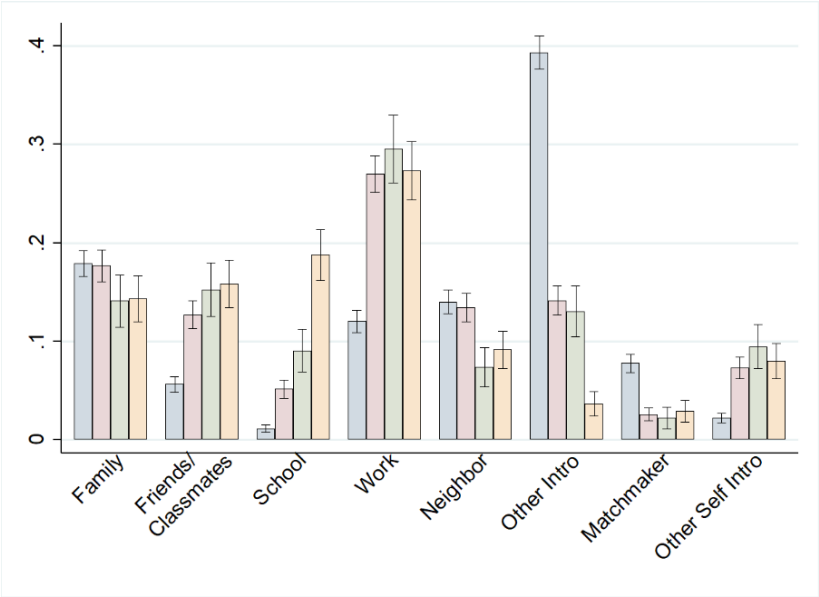
US 2009/2017



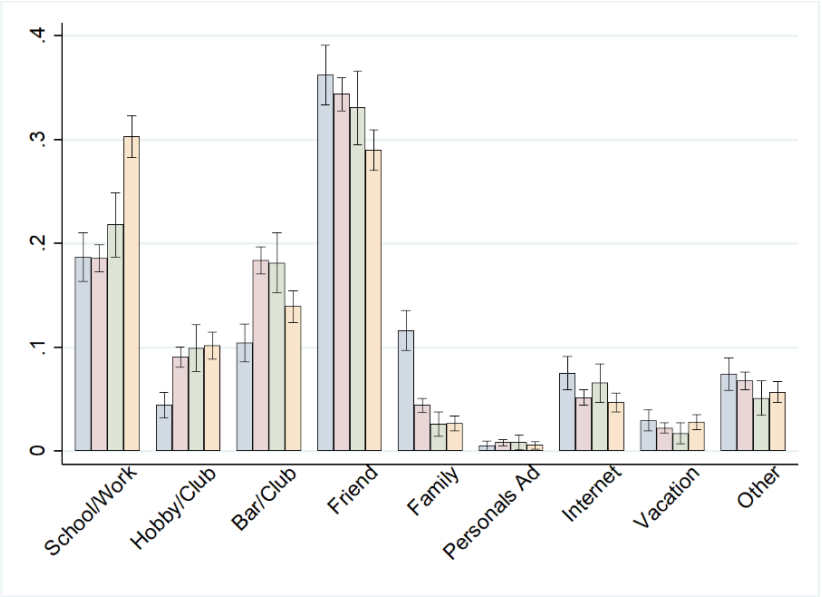
US 1992

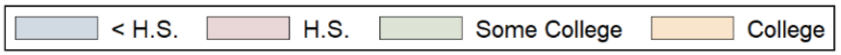


East Asia 2006

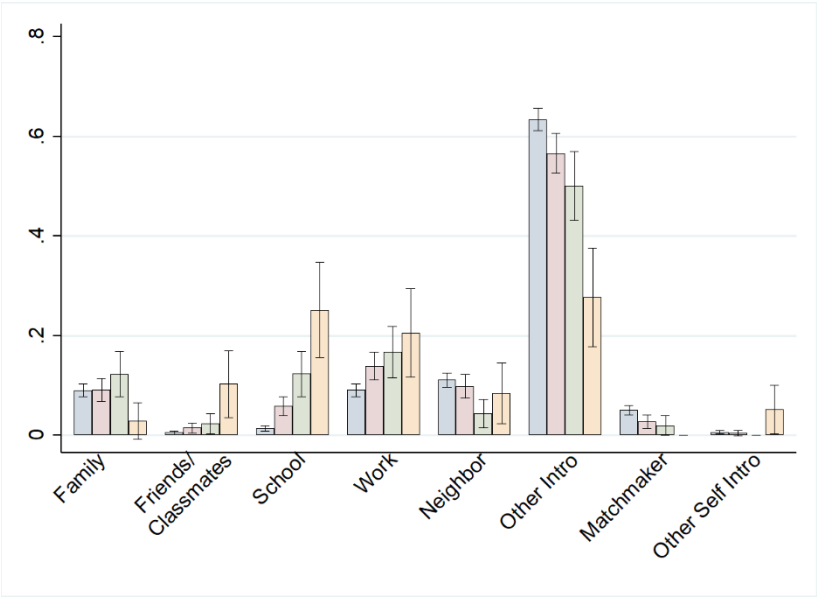


Germany 2008-9

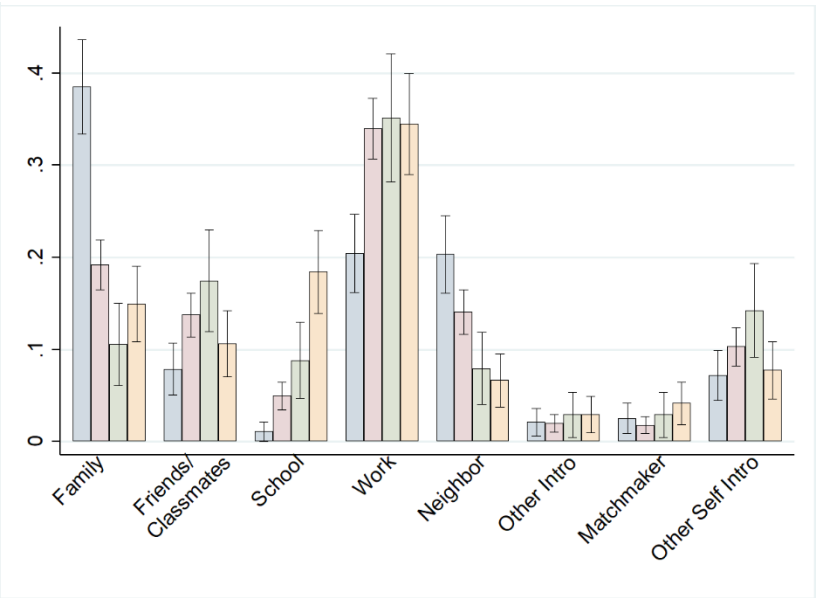




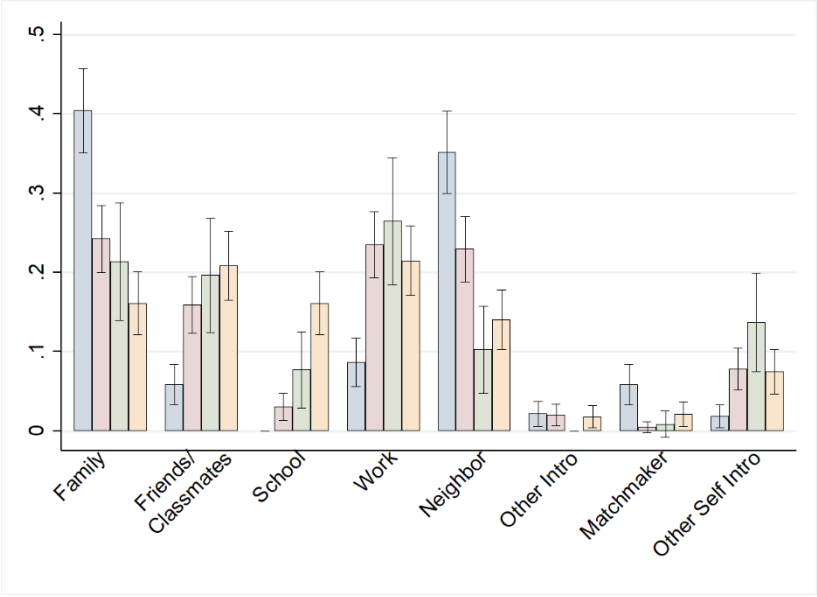
China 2006



Japan 2006



South Korea 2006



Taiwan 2006

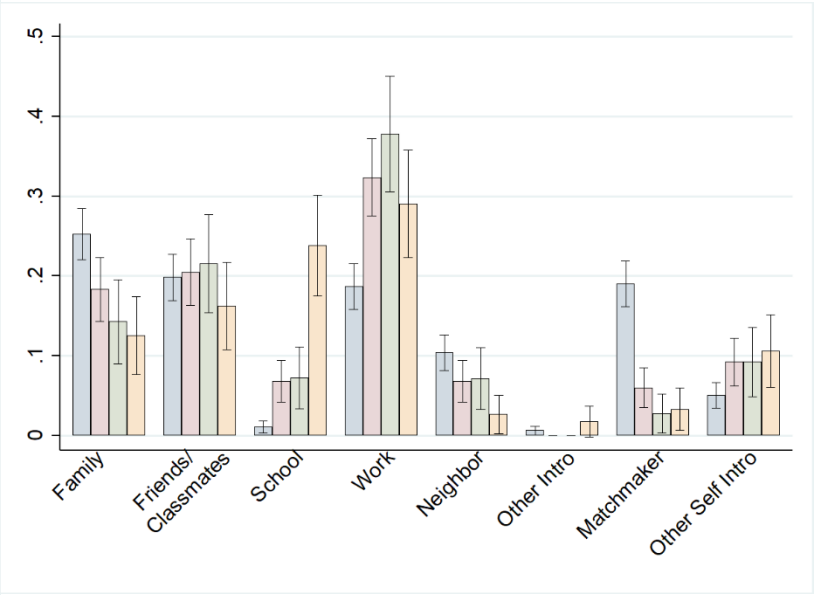
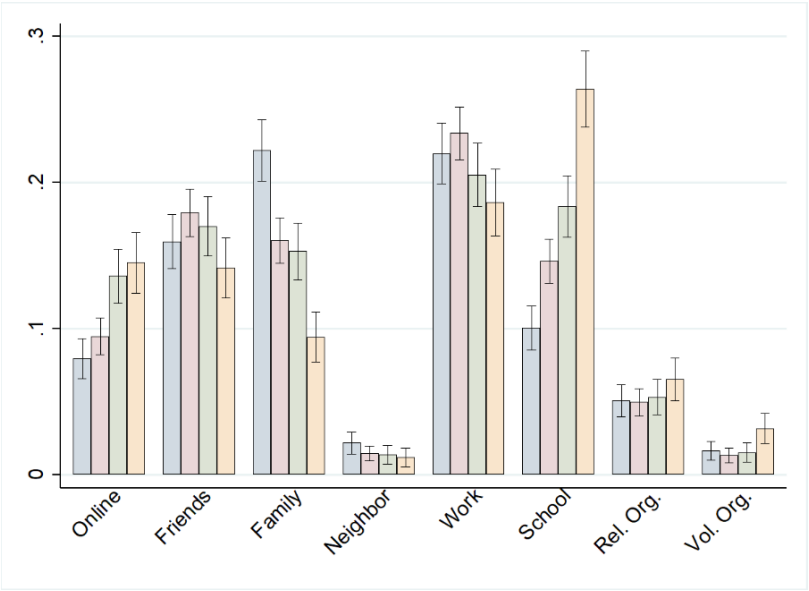
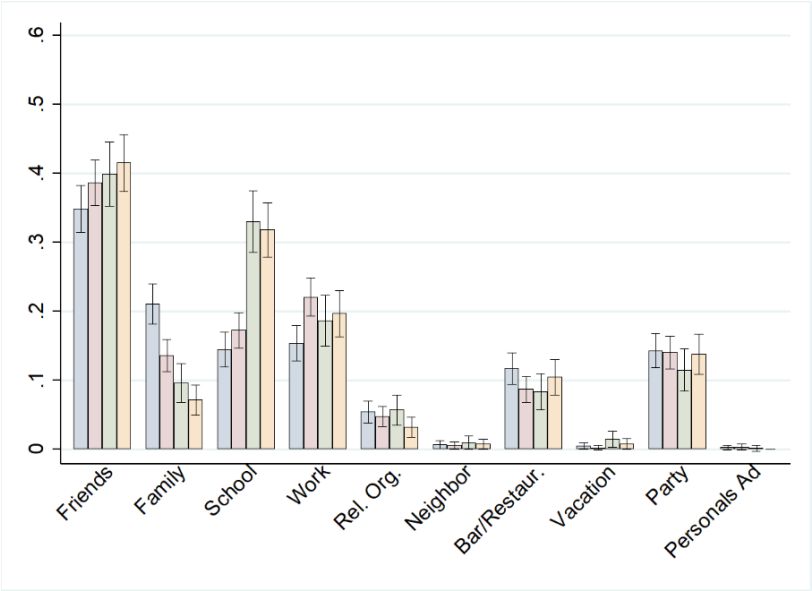


Figure A3. Parent's Highest Educational Degree

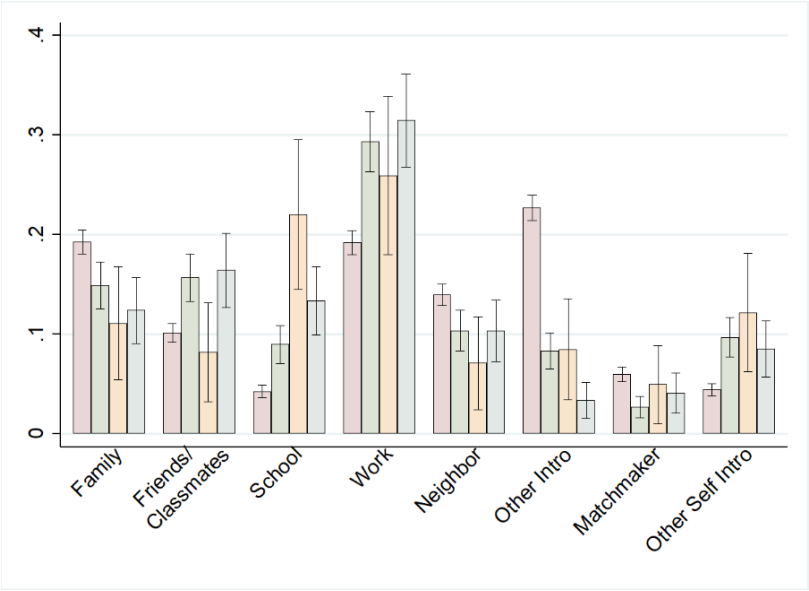
US 2009/2017



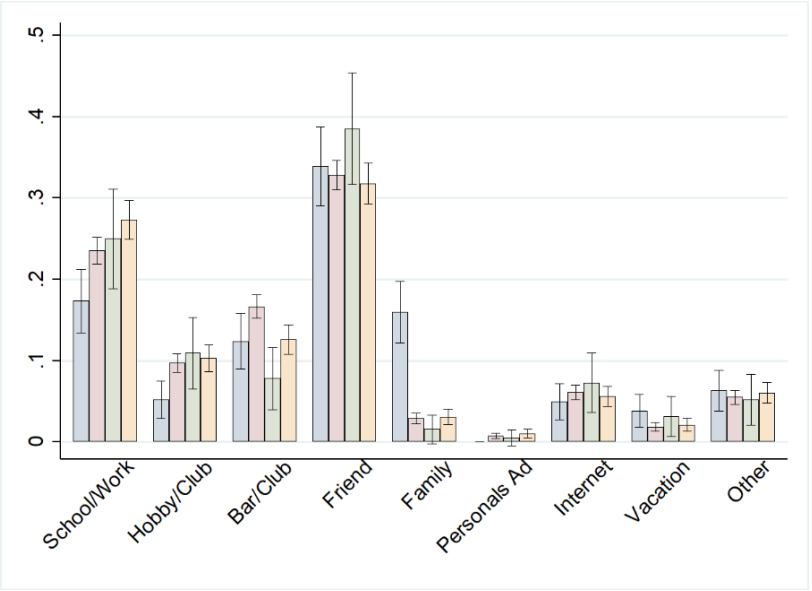
US 1992

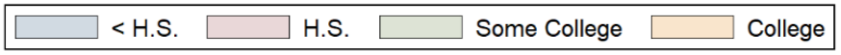


East Asia 2006

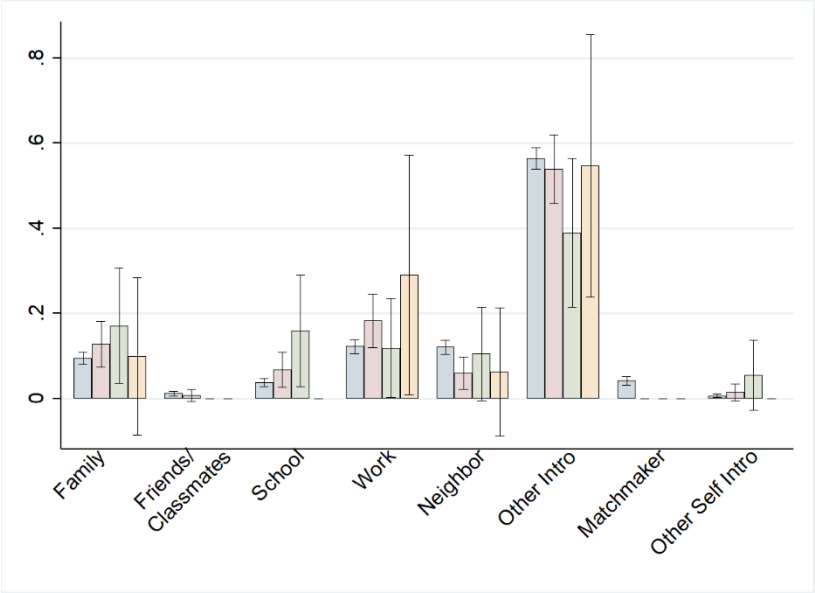


Germany 2008-9

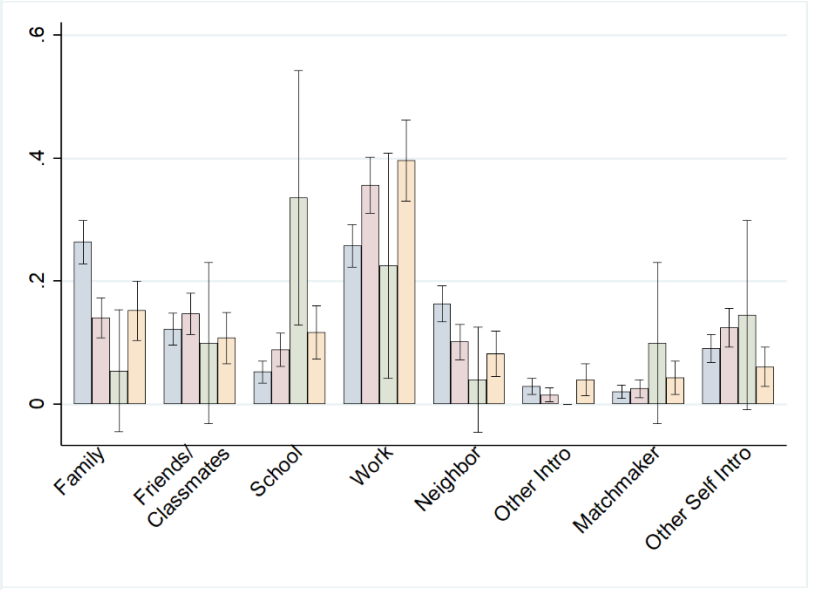




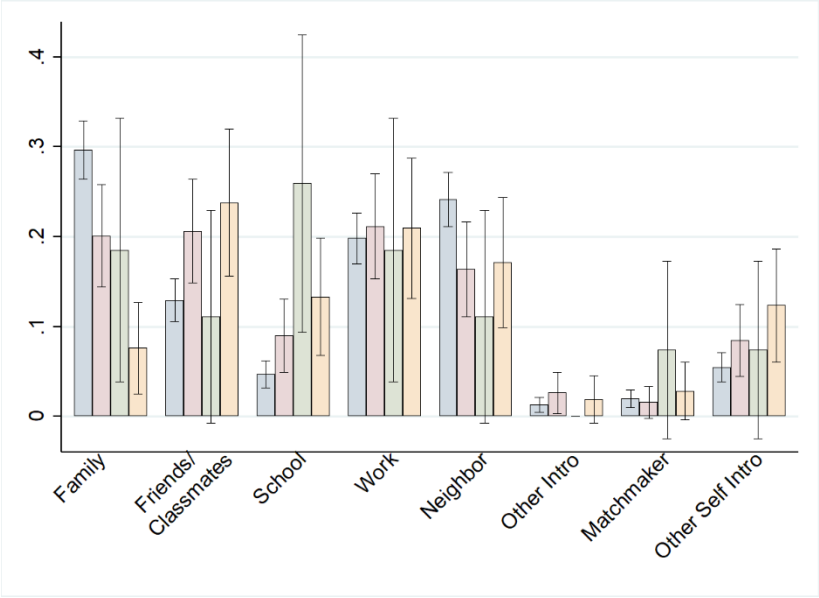
China 2006



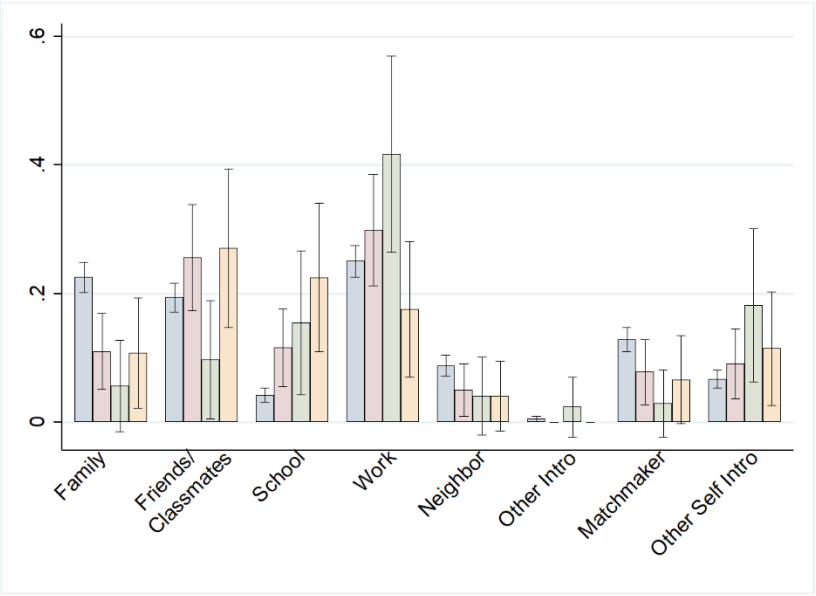
Japan 2006



South Korea 2006



Taiwan 2006



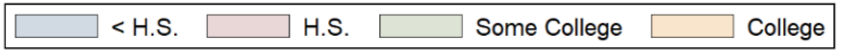
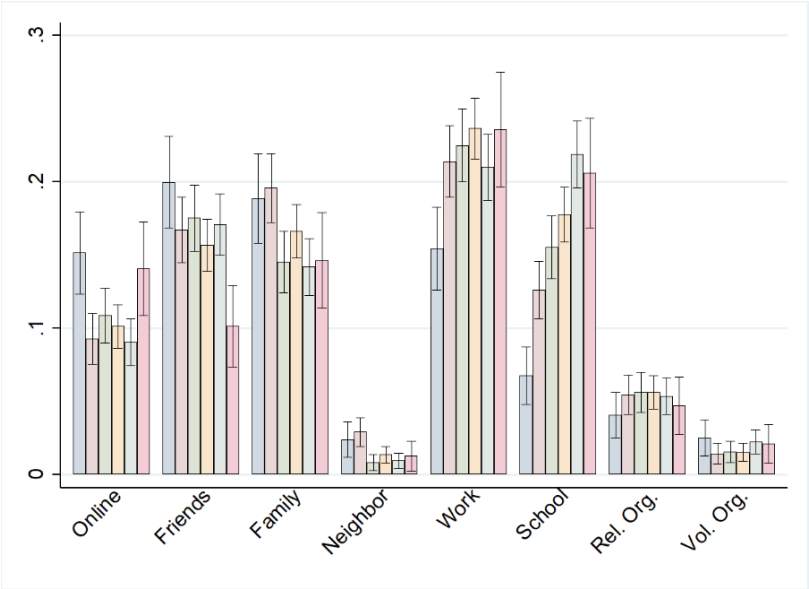
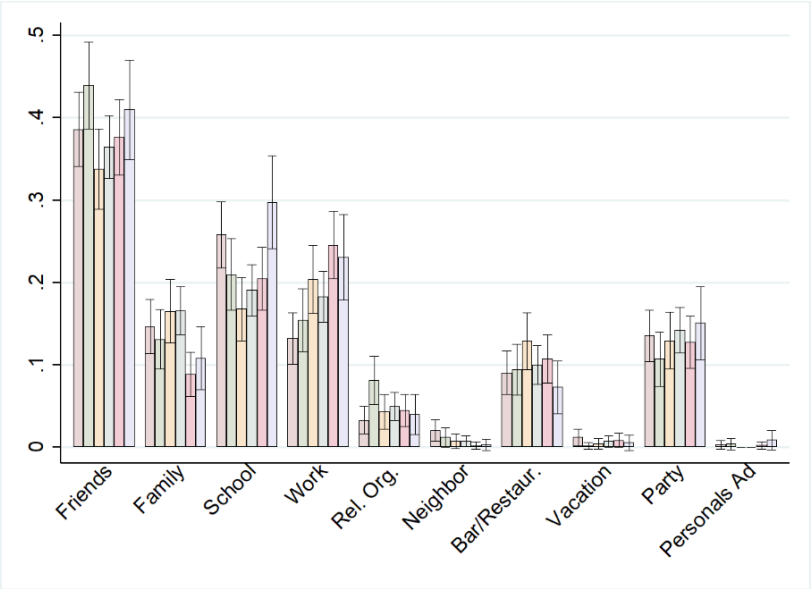


Figure A4. Household Income, in Sextiles

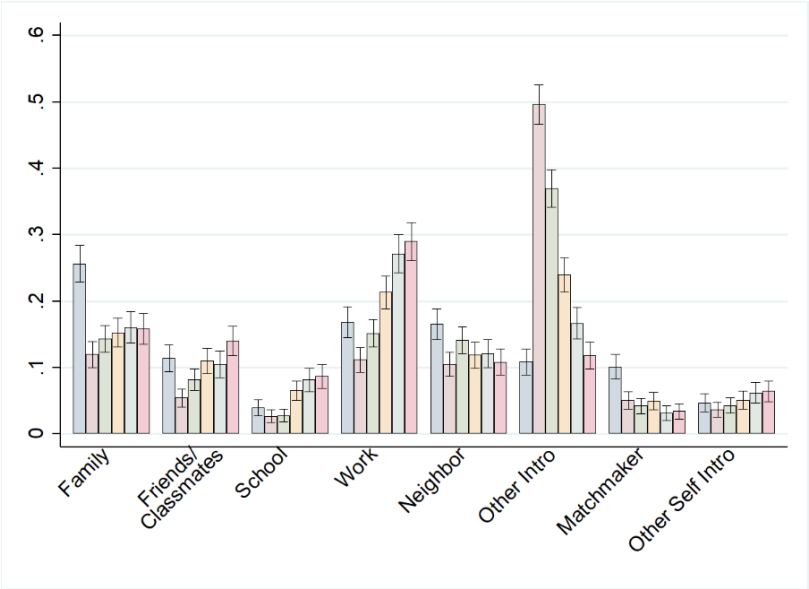
US 2009/2017



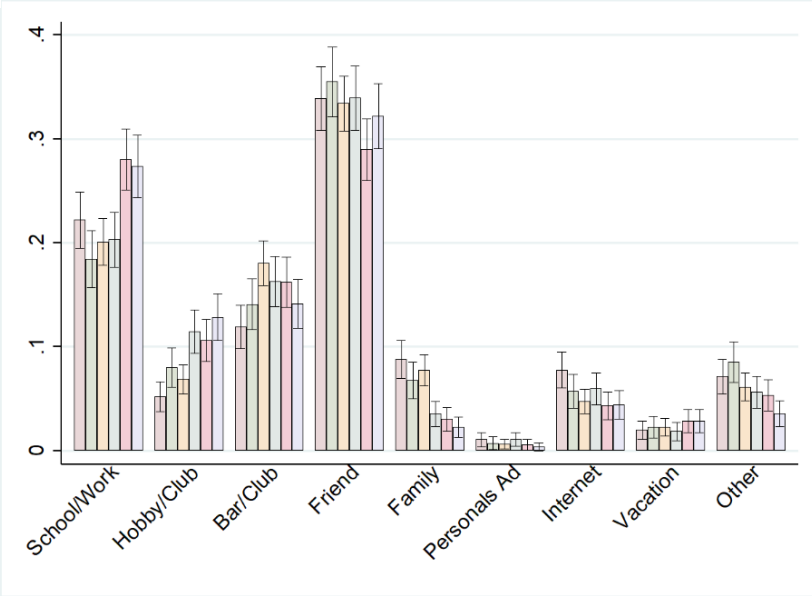
US 1992

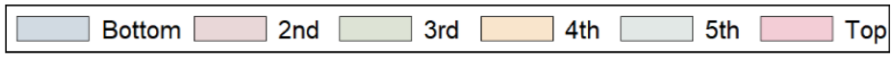


East Asia 2006

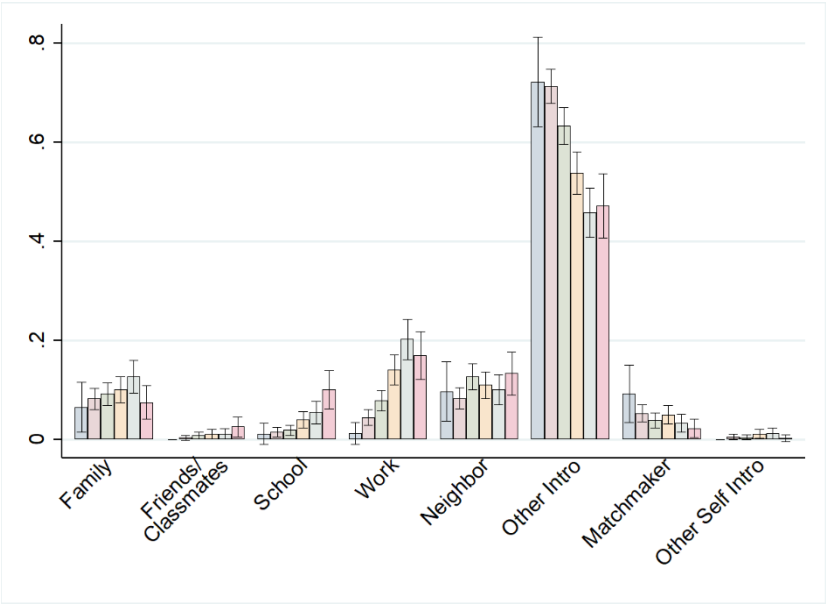


Germany 2008-9

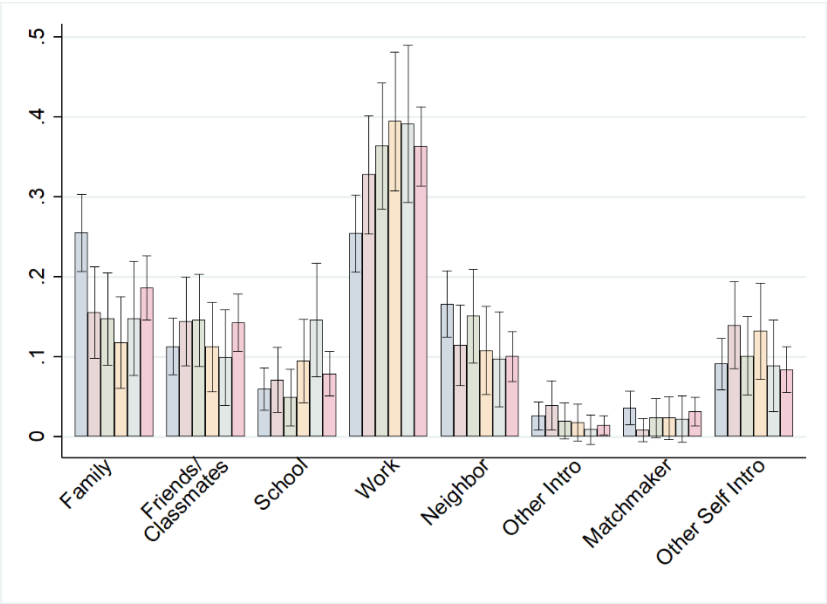




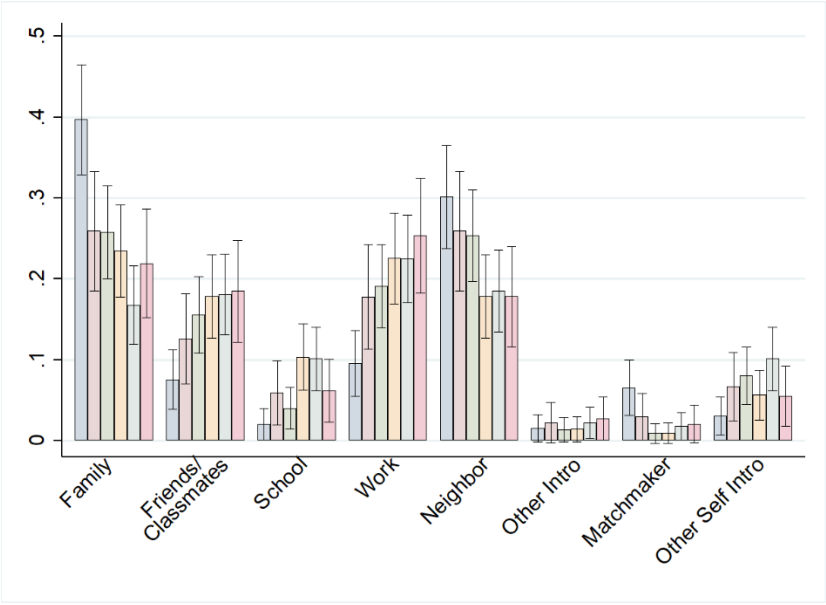
China 2006



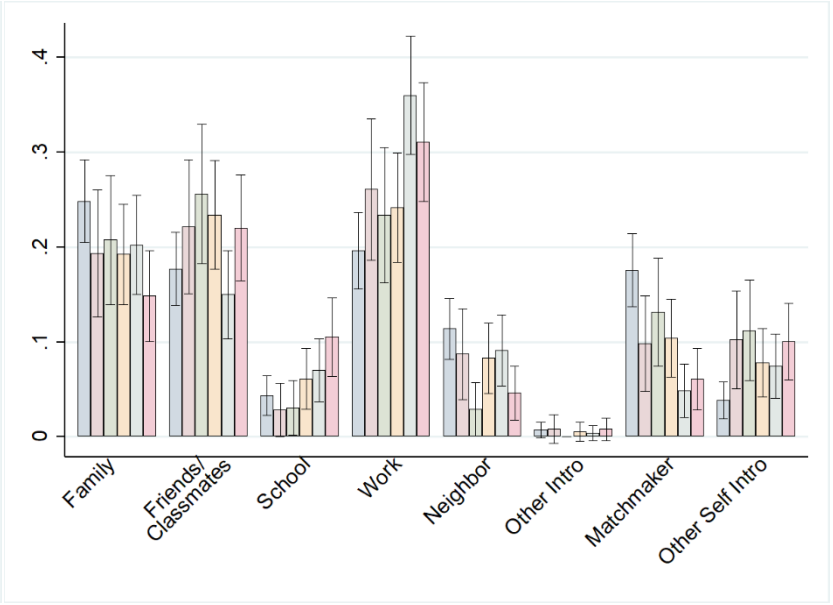
Japan 2006

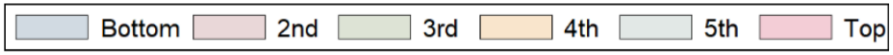


South Korea 2006



Taiwan 2006





Section B. Survey Instruments

East Asian Social Survey (Kim et al. 2006)

English Translation

26. [QH1] How did you get to know your current spouse for the first time?

① by arrangement ┐--(go to Q26-1[QH1.1])

② by introduction ┘

③ by myself – (go to Q26-2[QH1.2])

26-1. [QH1.1] Who arranged or introduced the first meeting?

① Siblings or cousins

② Parents or other relatives

③ Friends or classmates

④ Colleagues

⑤ Match-maker or professional match-maker company

⑦ Other (Specify:_____)

* Each team has an option to spell out one more response category “⑥ Neighbors or other elders (not kin).” KGSS decided to have it.

26-2. [QH1.2] Where did you meet your spouse?

① In neighborhood

② At school

③ At workplace

④ At the family-related occasion

⑤ On other occasions (Specify:_____)

* Each team has an option to spell out one more response category “④ At the family-related occasion.” KGSS won’t have it.

Chinese Version

G2. **您和他/她是怎么相**识的？（单选）

相亲安排 1

别人介绍 2

自己本身 ..... 3→**跳**问 G2b题

G2a. 谁安排或介绍第一次见面？（单选）

兄弟姐妹或堂(表)兄弟姐妹 1

父母或其他亲戚 2

朋友或同学 3

邻居或其他长辈 4

同事 5

媒人或婚姻介绍所 6

其他（请注明：_____） 7

G2b. **您**们是在哪里相识的？（单选）

住在同一村里(地方) 1

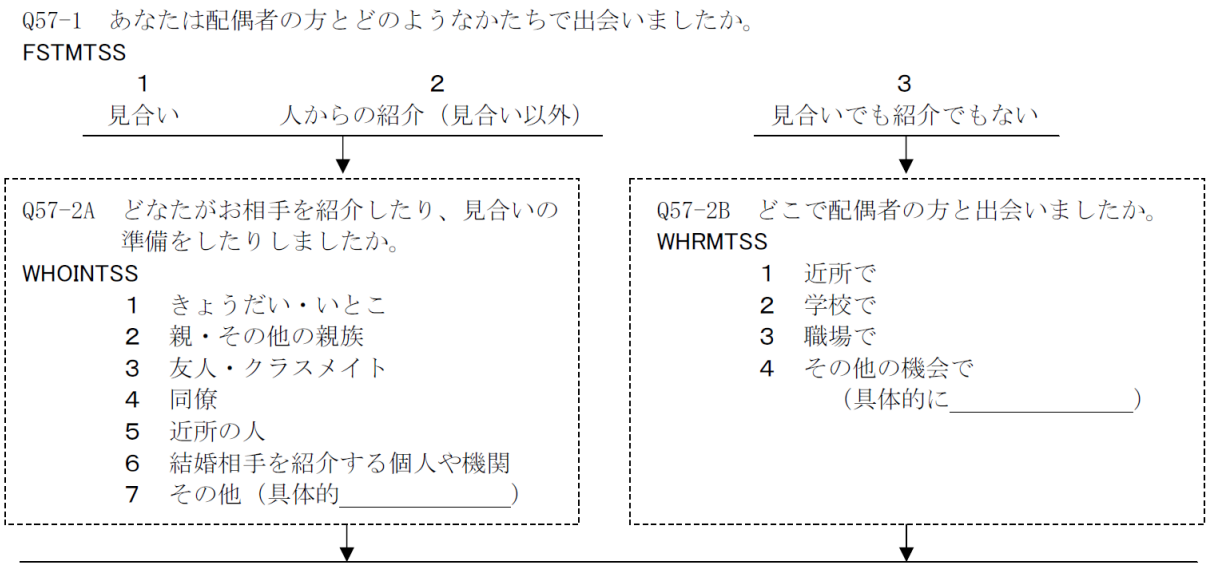
在学校 2

在工作场合 3

在家庭相关的聚会场所 4

其他（请注明：_____） 5

Japanese Version



Korean Version

77. 배우자를 처음에 어떻게 알게 되었습니까?

____① 중매로 ____② 소개로	____③ 나 스스로
77.1 배우자를 누가 처음 중매 혹은 소개하였습니까? ____① 형제자매 혹은 사촌 ____② 부모 혹은 다른 친척 ____③ 친구 혹은 학교 친구 ____④ 동료 ____⑤ 결혼중매인 혹은 결혼정보회사 ____⑥ 이웃 혹은 친지 ____(77)기타 (누구:)	77.2 배우자를 어디에서 처음 만나셨습니까? ____① 동네에서 ____② 학교에서 ____③ 직장에서 ____(77) 기타 (어디에서:)

Taiwanese Version

28.[QH1] 您第一次如何認識您目前的配偶? □

□ (1)相親安排 □ (2)別人介紹 □ (3)自己本身 (跳答 Q28-2[QH1.2])

28-1.[QH1.1] 誰安排或介紹第一次會面? □

□ (1)兄弟姊妹或堂(表)兄弟姊妹 □ (2)父母或其他親戚 □ (3)朋友或同班同學

□ (4)同事 □ (3)媒人或婚友社 □ (7)其它 (請說明_____)

28-2.[QH1.2] 您在哪認識您目前的配偶? □

□ (1)住在同一村里(地方) □ (2)在學校認識

□ (3)在工作場合認識 □ (4)在其它場合認識 (請說明_____)

German Family Panel (Pairfam) (Brüderl et al. 2016)

English Translation:	Actual Survey Question:
How did you meet?	**Wie haben Sie sich kennengelernt?**
Through school, training, work ... 1	Über Schule, Ausbildung, Beruf ... 1
Hobby, club, sports 2	Hobby, Verein, Sport 2
Bar, night club 3	Kneipe, Disko 3
Through friends or acquaintances 4	Im Bekannten- oder Freundeskreis 4
Through relatives 5	Durch Verwandte 5
Through a personal ad 6	Durch eine Anzeige 6
Through the Internet 7	Durch das Internet 7
Vacation 8	Urlaub 8
Other 9	Sonstiges 9
Don't know ..... -1 No answer ..... -2	Weiß nicht ..... -1 Keine Angabe ..... -2

National Health and Social Life Survey (Laummann et al. 1992)

18. Where did you meet (PARTNER)?

CODE ALL THAT APPLY.

Work.....01

School.....02

Church/church activity.....03

Personal ads/ Dating service.....04

Vacation/business trip.....05

Bar/night club/dance club.....06

Social organization/health club/

gym/volunteer-service activity.....07

Private party.....08

Other (SPECIFY)_____.....09

19. HAND CARD #4 Who introduced you to (PARTNER)? CODE ALL THAT

APPLY.

family.....01

mutual friends or acquaintances.....02

co-workers.....03

classmates.....04

neighbors.....05

introduced self or partner introduced self...06

Other (SPECIFY)_____.....07

How Couples Meet and Stay Together Survey (Rosenfeld et al. 2015)

[PROMPT TWICE; first prompt should say, “Please add more details, we want to understand your story.” SECOND PROMPT: If response is less than 100 characters, the second response will say: “Is there anything else you could add? Every detail helps us.”]

Q24. Please write the story of how you and [Partner_Name] first met and got to know one another and be sure to describe "how" and "where" you first met.
[LARGE TEXT BOX]

Q25. Did you and [Partner_Name] attend the same high school?

Same High School 1

Different High School..... 2

[If PPEDUC ≥ 10 AND Q10 ≥ 10, ask Q26]

Q26. Did you and [Partner_Name] attend the same college or university?

Attended same college or university 1

Did not attend same college or university..... 2

Q27. Did you and [Partner_Name] grow up in the same city or town?

Yes..... 1

No..... 2

Q28. Did your parents know [Partner_Name]'s parents before you met [Partner_Name]?

Yes..... 1

No..... 2

Q31. Where did you meet [Partner_Name]? Choose all that apply.

Work..... 1

School..... 2

Church/Church Activity..... 3

Personal Ads/Dating Service via the

Internet..... 4

Vacation/Business Trip 5

Bar/Nightclub/Dance club..... 6

Social Organization/health

club/gym/volunteer-service activity..... 7

Private Party..... 8

Other (Specify) [TEXTBOX]..... 9

Q32. Did you use an internet service to meet [Partner_Name]?

No, I did not meet [Partner_Name] through the internet..... 1

Yes, a social networking site (like Facebook or Myspace)..... 2

Yes, an internet dating or matchmaking site (like eHarmony or match.com) 3

Yes, an internet classified advertising site (like Craigslist)..... 4

Yes, an internet chat room..... 5

Yes, an app on my phone (like Tinder or Grindr).....8 [2017 survey only]

Yes, a different kind of internet service.....6

Q33. Who introduced you to [Partner_Name]? Choose all that apply.

Family..... 1

Mutual friends or acquaintances..... 2

Co-workers..... 3

Classmates 4

Neighbors..... 5

Introduced self or partner introduced self..... 6

Other (please specify) [TEXTBOX]..... 7

Section C. Full Regression Model Coefficients

Table C1: Odds Ratios Predicting Romantic Source, U.S. 1992 (NHSLS)

	(1)	(2, vs Organizational)	
	Unbrokered	Introduced	Unbrokered
Racial/Ethnic Minority	1.183	1.088	1.242
	(0.184)	(0.152)	(0.213)
Education Scale	0.903	0.771***	0.792**
	(0.072)	(0.049)	(0.068)
Parent's Ed. (vs No College)			
1-2 College Grads	1.206	0.714*	1.054
	(0.207)	(0.100)	(0.190)
Missing Parent's Ed.	1.604	1.342	1.883
	(0.563)	(0.465)	(0.744)
Occupation (vs Not PTM)			
Prof./Tech./Mngr.	1.085	0.990	1.080
	(0.182)	(0.139)	(0.194)
Not Employed	0.904	0.758*	0.796
	(0.149)	(0.103)	(0.143)
Income Sextile	0.978	0.901**	0.930
	(0.045)	(0.037)	(0.047)
Female	0.940	1.205+	1.035
	(0.121)	(0.131)	(0.145)
Age	1.031***	1.047***	1.057***
	(0.009)	(0.009)	(0.011)
Size of Metro	1.000***	1.000	1.000***
	(0.000)	(0.000)	(0.000)
Married	0.845	0.741	0.717
	(0.188)	(0.145)	(0.178)
Coresident	1.053	1.246	1.191
	(0.244)	(0.255)	(0.305)
Years Together	0.974**	0.966***	0.955***
	(0.010)	(0.009)	(0.011)
Observations	2333	2333	
Pseudo R^2	0.029	0.036	
BIC	2258.176	5110.637	

Exponentiated coefficients; Standard errors in parentheses
+ $p < 0.10$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table C2: Odds Ratios Predicting Romantic Source, U.S. 2009/17 (HCMST)

	(1)	(2, vs Organizational)		
	Unbrokered	Introduced	Unbrokered	Internet
Racial/Ethnic Minority	1.247*	1.050	1.751***	0.943
	(0.116)	(0.091)	(0.218)	(0.133)
Education Scale	0.962	0.750***	0.722***	1.019
	(0.048)	(0.032)	(0.048)	(0.078)
Mother's Ed. (vs Not a College Grad)				
College Grad	0.903	0.742**	0.685+	0.797
	(0.106)	(0.082)	(0.142)	(0.119)
Missing Mthr's Ed.	1.230	0.575	1.048	0.805
	(0.708)	(0.303)	(0.737)	(0.751)
Income Sextile	0.978	0.921**	0.966	0.941
	(0.034)	(0.028)	(0.050)	(0.045)
Female	0.721***	1.019	0.669***	0.775*
	(0.062)	(0.076)	(0.080)	(0.096)
Age	1.030***	1.010*	1.048***	1.025***
	(0.004)	(0.004)	(0.006)	(0.005)
Not Employed	1.256*	1.021	1.099	1.337*
	(0.123)	(0.088)	(0.154)	(0.192)
Size of Metro	1.000	1.000	1.000	1.000
	(0.000)	(0.000)	(0.000)	(0.000)
Years Together	0.952**	1.005	0.988	0.905**
	(0.017)	(0.012)	(0.020)	(0.028)
Married	0.914	0.672**	0.707+	1.155
	(0.117)	(0.083)	(0.133)	(0.206)
Coresident	0.805+	1.496**	0.995	1.250
	(0.105)	(0.187)	(0.186)	(0.216)
Sample Year=2017	1.256*	0.883	0.658***	2.530***
	(0.115)	(0.070)	(0.081)	(0.348)
Retrospective Relationship	0.788	0.503***	0.563+	0.543*
	(0.169)	(0.102)	(0.186)	(0.145)
Relationship Duration	0.992	0.989	0.979	0.939*
	(0.018)	(0.011)	(0.019)	(0.029)
Observations	5157	5157		
Pseudo R^2	0.083	0.100		
BIC	3.259e+08	7.625e+08		

Exponentiated coefficients; Standard errors in parentheses

+ $p < 0.10$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table C3: Odds Ratios Predicting Romantic Source, East Asia 2006 (EASS)

	(1)	(2, vs Organizational)	
	Unbrokered	Introduced	Unbrokered
Education Scale	0.840**	0.825***	0.743***
	(0.050)	(0.039)	(0.049)
Parent's Ed. (vs No College)			
1-2 College Grads	0.895	1.184	1.011
	(0.166)	(0.178)	(0.202)
Missing Parent's Ed.	0.935	1.058	1.030
	(0.149)	(0.120)	(0.181)
Occupation (vs Not PTM)			
Prof./Tech./Mngr.	1.292+	0.928	1.253
	(0.171)	(0.094)	(0.181)
Not Employed	1.246+	1.154	1.378*
	(0.163)	(0.119)	(0.202)
Income Sextile	1.049	0.917***	0.981
	(0.038)	(0.023)	(0.038)
Years Together	1.011	0.966***	0.989
	(0.012)	(0.009)	(0.014)
Country (vs China)			
Japan	3.559***	0.230***	1.334+
	(0.544)	(0.028)	(0.228)
South Korea	2.740***	1.017	2.731***
	(0.422)	(0.123)	(0.484)
Taiwan	1.670***	0.420***	0.916
	(0.252)	(0.046)	(0.153)
Age	0.966**	1.088***	1.022
	(0.012)	(0.011)	(0.015)
Female	0.892	1.438***	1.126
	(0.098)	(0.119)	(0.137)
Married	0.932	1.550+	1.231
	(0.296)	(0.388)	(0.459)
Coresident	0.827	1.089	0.904
	(0.206)	(0.205)	(0.261)
Size of Metro	1.006	0.728***	0.806***
	(0.050)	(0.028)	(0.045)
Observations	6017	6017	
Pseudo R^2	0.034	0.100	
BIC	4259.731	9785.675	

Exponentiated coefficients; Standard errors in parentheses

+ $p < 0.10$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table C4: Odds Ratios Predicting Romantic Source, Germany 2008-9 (Pairfam)

	(1)	(2, vs Organizational)		
	Unbrokered	Introduced	Unbrokered	Internet
Racial/Ethnic Minority	0.768*	1.919***	1.238	0.823
	(0.092)	(0.231)	(0.189)	(0.255)
Education Scale	0.836***	0.742***	0.707***	0.728**
	(0.036)	(0.033)	(0.038)	(0.074)
Parent's Ed. (vs No College)				
1-2 College Grads	0.723+	0.932	0.666+	0.805
	(0.138)	(0.155)	(0.153)	(0.283)
Missing Parent's Ed.	1.090	1.134	1.220+	0.970
	(0.089)	(0.102)	(0.124)	(0.187)
Occupation (vs Not PTM)				
Prof./Tech./Mngr.	1.012	0.770*	0.896	0.876
	(0.102)	(0.083)	(0.108)	(0.211)
Not Employed	0.950	0.984	0.891	1.381
	(0.098)	(0.110)	(0.115)	(0.337)
Income Sextile	1.029	0.950+	0.996	1.065
	(0.027)	(0.027)	(0.032)	(0.062)
Years Together	0.977*	0.988	1.003	0.720***
	(0.009)	(0.010)	(0.011)	(0.022)
Age	1.007	0.977*	0.981+	1.027
	(0.009)	(0.010)	(0.012)	(0.020)
Size of Metro	0.969	1.030	0.968	1.077
	(0.023)	(0.026)	(0.029)	(0.058)
Female	1.006	0.933	0.911	1.230
	(0.083)	(0.082)	(0.093)	(0.231)
Married	1.007	1.198	1.218	1.066
	(0.104)	(0.134)	(0.158)	(0.239)
Coresident	0.939	1.086	0.928	1.868*
	(0.124)	(0.163)	(0.158)	(0.467)
Observations	4478	4478		
Pseudo R^2	0.012	0.052		
BIC	4498.625	9150.802		

Exponentiated coefficients; Standard errors in parentheses

+ $p < 0.10$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$